THE NATION'S SCHOOLS

DEVOTED TO THE APPLICATION OF RESEARCH TO THE BUILDING, EQUIPMENT AND ADMINISTRATION OF SCHOOLS

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Looking Forward . . .

Public Education Improves Its Position . . . . The Public Schools Are Not Even Imaginatively Radical . . . . Bertrand Russell Contributes Another Notable Book . . . . Has Someone Been Fooling the American Federation of Labor? . . . Success to a New Educational Publication

NINETEEN Thirty-Four closes with the public schools in relatively the best position since the beginning of the depression. Lest this statement appear too optimistic and extravagant it may be well to review briefly the major events of the last five years. For the first year and a half the schools benefited from the natural lag between the general recession and its full impress on public business. It was quite natural for various interest-groups, stunned by the continuing effects of the rapidly deepening depression, to react in the traditional manner in 1931-32 and demand a restriction of all public effort with particular emphasis on public education. Caught almost entirely unprepared, both state and national professional interest groups were a little slow in getting into action. It was not until late in 1932 that educational leaders were able to divorce recovery plans from membership campaigns in the minds of the secretariat.

Special interest groups made so tremendous a drive against the schools that it seemed by the end of 1932 as if the following legislative year would see an unusual condensation and curtailment of the legal plans under which the schools operate. December, 1932, was the all-time low for public education!

In January, 1933, state legislatures, elected on a tax reduction platform, met in forty-four of the states. A terrific propaganda barrage was immediately laid down on these legislatures by realty and finance and by speculative and industrial groups. The situation was most serious. However, in the closing months of 1932 the National Commission on the Emergency in Education did its best work in stimulating state and national organizations and in creating a counter-pressure against the destructive attempts of the reductionists. Immediate demands for curtailment to state legislatures went naturally through the rather laborious and time-consuming process of consideration by committees. The value of the legal framework as a protective cushion against shortsighted, highly emotionalized pressure plans was never more strongly demonstrated. Before the legislatures could act a strong supporting public opinion for public education began to make itself felt.

The struggle between social and economic interests continued throughout the first half of 1933.

When the legislatures adjourned not only had the legal program of public education remained practically unimpaired but in many instances special emergency financial legislation actually offered some relief.

By July, 1933, it was obvious that the existing system of public education had been retained by popular demand against the most terrific pressure ever exerted against it in the history of this country. The unintelligent propaganda was slowly but steadily retreating in the face of an aroused social reaction to selfish interests. We stated at the time that the crisis had been passed and that recovery was slowly taking place. Recovery, however, was not immediately apparent because the full effects of certain budget adjustments were not felt until early in 1934.

By the middle of 1933 the states had at last awakened to the fact that the salvation of the schools lay in programs of reconstruction within each state. The most outstanding feature of the current year has been the development of comprehensive state plans for reconstructing inadequate administrative units, for securing a wider financial base and for improving programs of interpretation. State effort was fortunately not slowed up much by the drive of the National Education Association for federal aid.

Since August one of these representative state plans, selected with respect to type and method, has been published in each issue of The NATION'S SCHOOLS. These plans are interesting both in conception and in execution. They represent unusual leadership on the part of constitutional state authority in some instances, and constructive effort by state teacher associations when such supplementation was needed. They also indicate the gradual recognition of the need for considering essential change in education by creating a public opinion among all of the people rather than the feeling of the predepression period that the welfare of the schools was primarily the concern of the teachers.

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The second feature has been the swift upturn in urban school districts. Here budgets have already felt the return of taxpaying ability and in numerous instances salary schedules have been completely restored and emergency decreases have been replaced. Executives and boards of education are beginning to give more budget consideration to restoration of curricular contractions and to complementary phases such as textbooks, supplies and physical plant maintenance. In some instances they are even considering ways and means of lightening the "stepped-up" teacher work-load.

The emergency and long-range problems confronting public education have not been completely solved by any manner of means. The final solution will depend upon the extent to which the several states are willing completely to overhaul their outworn methods of administration, their general and internal financing. This process will probably consume the better part of the ensuing decade. However, it is obvious that the American public is slowly regaining its emotional balance and is beginning to recognize values again. It seems therefore quite justifiable to repeat our opening assertion that public education will go into 1935 in relatively the best position since the beginning of the depression. There is consequently room for much rational optimism.

ALARMISTS who are continually pointing with nervous and hysterical fear to alleged radical teachings in public schools and institutions of higher learning bring nothing but a bored half-smile to those actually familiar with these institutions and their practices. Beyond the shadow of even a small doubt the American public school is one of the most conservative of our public institutions. Not only is the general administrative control vested in individuals well beyond middle age but the very nature of the personnel and its methods of selection preclude any great liberalism either in public schools or in public institutions of higher learning. Neither of these types of institutions has ever assumed a position of advanced social leadership in this country.

The typical college and university student is so smugly self-centered and complacent about the world and its problems that a world revolution would not shake him out of his inhibited calm. The faculties in like manner are largely conservative in their speculation on things social. The reasons have been aptly stated by Franz Boas, ". . . we may understand the characteristics of the behavior of the intellectuals. It is a mistake to assume that their mentality is, on the average, appreciably higher than the rest of the people. . . . Unusually strong and unusually weak individuals are the exceptions. For this reason the strength of character and intellect that is required for vigorous thought on matters in which intense sentiments are involved is not commonly found — among the intellectuals or in any other part of the population. This condition, combined with the thoroughness with which the intellectuals have imbibed the traditions of the past, makes the majority of them in all nations conventional. It has the effect that

their thoughts are based on tradition, and that the range of their vision is liable to be limited." We strongly recommend that our official and unofficial hysterical witch hunters exercise their talents in directions where the outcomes will not be so completely ludicrous.

BERTRAND RUSSELL'S latest work entitled "Freedom *Versus* Organization" (Norton) while not immediately related to technical problems of education is as significant to the professional educationist as his earlier books dealing with philosophy and planning. In the most detached manner and with broad sweeps of the brush he portrays for us the story of the struggle between the forces of freedom and the forces of organization for one hundred years, beginning with the Congress of Vienna in 1814 and ending with the beginning of the World War in 1914. He marshals his facts deftly and entertainingly, showing the part that organization plays not only as a menace to liberty but also as an aid to liberty. A paradox? Not at all. He traces simply the meaning and value of organization — concepts already long familiar to serious students of political theory and practical administration.

Especially significant is Russell's analysis of the development of democracy and plutocracy in the United States. From democratic Thomas Jefferson to plutocratic John D. Rockefeller is an interpretation of our evolving institutions never before developed in quite this manner. He shows specifically the lag between dragging political theory and the racing scientific technique, the difference between a traditional and a dynamic set toward life. The entire story, which might be tedious in ordinary hands, becomes a pattern that lives vividly and maintains interest at a high level. Not the least noteworthy are his poignant thumb-nail sketches of the individuals who march through these pages. With a few deft strokes he removes their stage props and presents a characterization at once vivid and realistic. It will probably rank as one of the best books of the year.

IT IS difficult to understand the action of the American Federation of Labor at its San Francisco meeting in adopting a resolution that requested President Roosevelt to rescind his executive order of June, 1933, by which the federal board for vocational education (Smith-Hughes) became a division of the Office of Education instead of functioning independently. The executive order was promulgated as a result of the recommendations of the federal advisory board in the interests of securing a more unified concept and a closer relationship of vocational education with general education.

The recommendation was farseeing and the executive order making it effective was a step forward in maintaining our traditional concept of the unity of the educational process. The maintenance and strengthening of a series of independent boards or bureaus in either federal or state organization, each having a vertical sectional interest in the educational plan, cannot be helpful to public education over a long period.

It is just this type of unbalanced and distorted isolation of specific aspects of a general problem that the states are attempting to clear up during the period of reconstruction already started. There is only one way to maintain unity of aim and effort, to forestall all tendencies towards separateness or ultimate class education, to keep intact the democratic ideal of a single unified and well integrated system of public education, and that is through placing all power within a unit organization where all phases of education may receive proportional attention.

The President's executive order of June, 1933, was merely one of a series of essential integrating movements that must be taken. Had it not been for the resistance of the several states in the early years of Smith-Hughes work, there would probably be now in existence separate systems for vocational education or class schools. So far as any available evidence is concerned the federal board for vocational education has not been hampered by its integration with the Office of Education. It is distinctly in the interest of labor to support tendencies toward unification.

WE BID welcome to the latest arrival in the field of professional publication. "The Social Frontier," edited by George S. Counts, assisted at present by a group of associates largely drawn from Teachers College, Columbia University, made its first appearance in October. In format it resembles its prototypes in the general field of social reform. It is an ultra-progressive monthly adopting, we assume from careful reading, the mission of producing a classless or cooperative society through the development of extreme class consciousness. These little differences never seem to bother the zealous reformer. The first number was interestingly written and presented. We wish it all success, which includes good circulation.

The Editor

The new Dwight Morrow High School, Englewood, N. J., represents a great deal of high school for the money spent.

New Jersey Surveys Its Schools

By FRANK G. PICKELL
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and President, New Jersey State
Teachers' Association

IN THE early months of 1932 the exigencies of the depression began forcing in increasing measure curtailments upon the public schools of New Jersey. Boards of education in many districts were finding it next to impossible to secure ready funds to pay teachers' salaries. The state school tax was breaking down, the curriculum was suffering drastic curtailment and the movement to reduce salaries unreasonably was gaining headway.

Without question, many of these difficulties were a direct result of the financial depression, but it became increasingly apparent that the difficulties to a great degree could be traced to fundamental weaknesses in the state system of financial support. The poorer districts, which had been operating on the lowest cost level, were suffering the worst curtailments. Their educational offering was of the meagerest sort, their per pupil expenditures were extremely low, and yet their tax rates were unreasonably high. In these communities further reductions could be effected only through unreasonable retrenchments or perhaps by closing schools.

In the wealthier districts the attitude toward education was a most reactionary one. This was not only due to the general belief that education was costing too much, but also to the fact that the taxpayer had finally begun to realize that he was and had been paying in property tax too large a share of the total tax bill. Aside from the fact that taxes were not being paid, these conditions in the local school districts emphasized two basic weaknesses in the system of state support: first, school support in New Jersey is almost entirely limited to property tax returns, and second, such state aids as are available are not being distributed to the various districts in an equitable manner.

A corner of the state capitol building at Trenton.

While the percentage of state taxes going to highways increased during the period from 1915 to 1930 by 500 per cent, the percentage of state money going to public schools was halved.

In April 1932, the New Jersey State Teachers' Association, sensing the oncoming school crisis, directed its welfare committee to make a study of the whole question of state support for public education. The welfare committee called into conference Dr. Paul R. Mort, director of the school of education, Teachers College, Columbia University, and under his direction a staff of experts began gathering material which revealed clearly the need of a fact-finding survey looking toward a better system of school support. A conference was had with the governor, and on October 25, 1932, he invited twenty-four citizens to cooperate in making a survey of the whole state school system. In his letter to the citizens invited to serve, the governor wrote, "The New Jersey State Teachers' Association has expressed its willingness to finance, out of its own funds, a fact-finding survey of New Jersey's educational system. At the request of this association I am appointing a committee of laymen and educators to cooperate in making such a survey and to propose recommendations in regard to an essential program of modern education and the means of financing it."

The commission thus appointed consisted of thirteen laymen and eleven school people and was organized on Nov. 28, 1932, under the chairmanship of Thomas N. McCarter, president of the Public Service Corporation of New Jersey. Doctor Mort was engaged to direct the research staff and Dr. Harley L. Lutz, professor of economics, Princeton University, to act as adviser on taxation.

The commission's report was published in December 1933 in two volumes; the first entitled "School Costs and Economies in the State of New Jersey" pointed out possible ways in which the costs of education could be reduced without affecting adversely the efficiency of schools, and the second entitled "Reconstruction of the System of Public School Support in the State of New Jersey" dealt thoroughly with this whole subject.

The commission's analysis of school costs showed

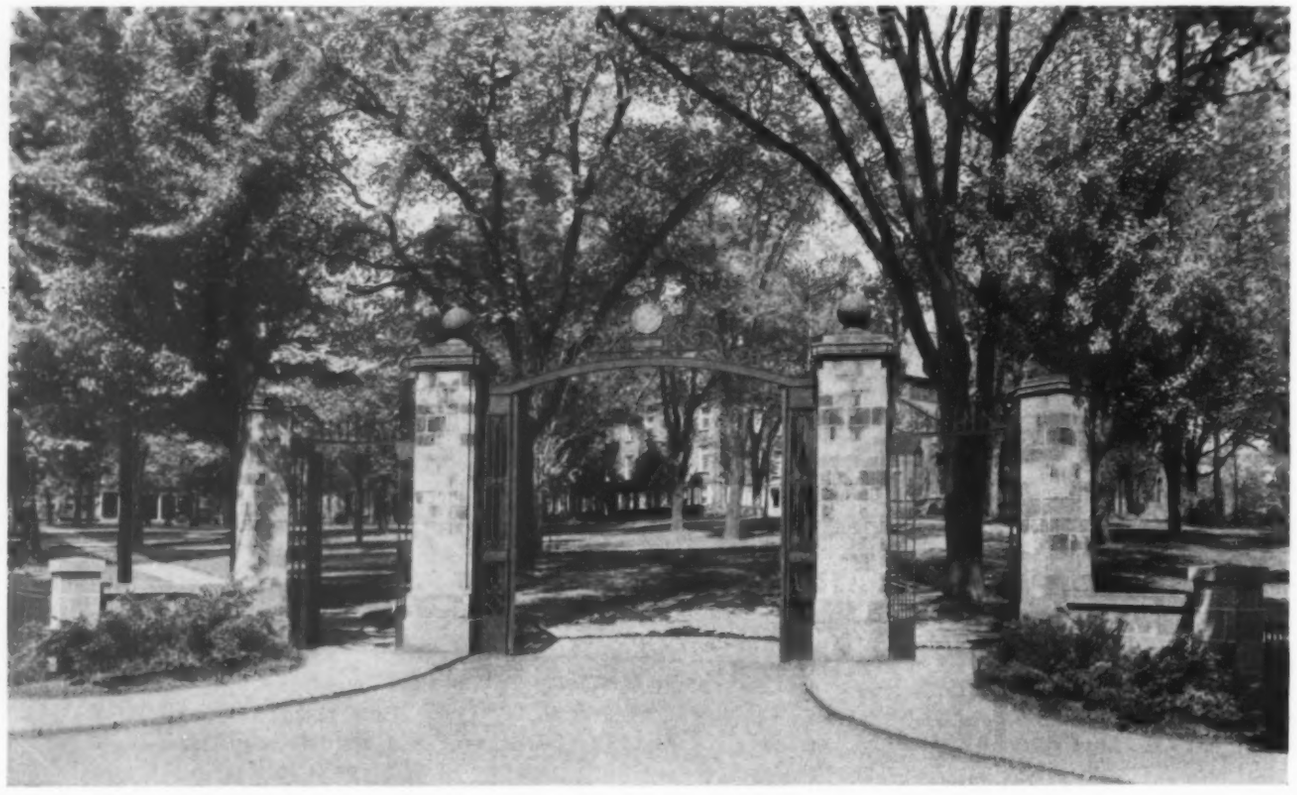
that the total cost of public schools in the peak school year, 1931-1932, was approximately $116,000,000. Further analysis revealed that since 1931-1932 retrenchments and economies had increased at an accelerated pace. District taxes ordered levied for schools in 1931-1932, exclusive of debt service, amounted to $76,831,675. In 1932-1933 they amounted to $74,099,232 and in 1933-1934 to $59,700,000. In round numbers the amount of district taxes levied for schools in the year 1933-1934 was less by $17,000,000 than the amount raised for the school year 1931-1932, a decrease of approximately 22 per cent.

While the volume on "School Costs and Economies" attracted the more attention from the public in the first instance, the facts with regard to the economies that had already been effected were so convincing that there has been an unparalleled rise in the public's belief that the salvation of education in New Jersey lies not in the direction of further drastic economies, but in the direction of a sound system of financial support. This change in public attitude was further enhanced when the total of district taxes levied for 1934-1935 showed a still further reduction.

Recommendations on "School Costs and Economies" are important and should serve as guides to local communities, particularly those which have unnecessarily and ruthlessly curtailed educational advantages. If these communities had had proper guidance, the same savings could have been effected with less hurt to the schools and consequently to the children. The commission recommended savings through the following means:

1. A slight increase in class size in Grades 1 to 8 and the elimination of small classes in academic high school subjects by more careful program planning.
2. An increase of size of classes in home economics and industrial arts in the elementary and secondary schools and the increase of class size in vocational and other special schools.
3. An increase in class size for mentally and physically handicapped children.
4. The elimination of mandatory regulations requiring all schools to accept five-year-old children.
5. The decrease in the number of janitorial-engineering employees by establishing standards for such service.
6. A more careful consideration of such matters as the purchase and firing of fuel and the cost of lighting.
7. A better utilization of school buildings.
8. A more careful planning of school buildings to reduce depreciation and obsolescence.
9. A reorganization of rural districts into larger and more efficient units.
10. The reorganization of transportation.

The commission further recommended that the state department of education study continuously the transportation problem in the several school



Entrance gates to Queen's Campus, Rutgers University, New Brunswick, N. J.

Library at State Teachers College, Hillwood Lake, N. J.

districts, provide more advisory service for local communities in planning school buildings, prepare and issue to the districts unit cost figures, and render continuous service to communities in the appraisal of present costs and the elimination of waste.

In the second volume the commission offered recommendations looking to the equalization of educational opportunity under a system that would guarantee the maintenance of a minimum or foundation program of education in every district of the state without forcing any district to levy an exorbitant tax upon its real estate.

The report pointed out that the present system of state support imposes too large a burden on the poorer school districts. The principal reason such conditions existed was due to the fact that nearly all the support of education in New Jersey comes from a tax upon real estate. Moreover, some of the wealthier districts have been receiving from state aid an amount of money sufficient to operate a program of education as costly as that provided in the poor districts while the poor districts have had to levy a local property tax of from 25 to 30 mills to provide the most meager type of educational opportunity.

While recognizing that expensive programs cannot equitably be made available to all children in the state at the present time, the commission urged that as soon as financial plans could be made effective New Jersey provide as a minimum opportunity for all of its children an educational program at least as acceptable as that now being provided in the districts of average wealth. Upon the basis of 1930-1931 costs, this will involve a guaranteed program in every district costing approximately $115 per elementary child.

The commission recommended as an immediate step the equalization of the burden of supporting a minimum or foundation program, which in 1930-1931 cost $57 per elementary pupil and $98 per high school pupil. The detailed steps of the plan proposed are as follows:

1. Repeal of the 2.75 mills state property tax imposed for the support of education.

2. A guarantee by the state to every district of a flat grant of $13 per elementary pupil and $22 per high school pupil, the funds for this grant to be derived from some tax other than the state property tax of 2.75 mills.

3. The requirement of each district to levy a local property tax of 4.75 mills on an equalized valuation of its property.

4. When the flat grant from the state together with the amount derived from the local 4.75 mills tax does not yield $57 per elementary pupil and $98 per high school pupil, the state shall give that district a sum, called "an equalization quota," sufficient to make up the shortage, the state monies required for this purpose to be derived from some

tax other than that derived from real estate.

The specific recommendations of the commission outlined in the foregoing steps would require the same total amount of state aid as is now derived from the state 2.75 mills property tax, from the main stem railroad tax, from the state school fund, and from other minor sources, all amounting to about $21,000,000 annually.

Since $18,000,000 of this total comes from the 2.75 mills tax that it is proposed to repeal, it would be necessary under the commission's recommendations to raise $18,000,000 from some tax or taxes other than the property tax. Since the cost of the schools in the state would not be increased by virtue of the commission's recommendations, it may properly be assumed that the commission's recommendations would immediately result in taking an $18,000,000 tax burden off of realty. The equalization of a higher cost minimum or foundation program would result in a further reduction of the property tax.

Facts Are Taken to the Public

With the completion of the commission's report, the teachers' association recognized that its work was only half completed. This forward looking report had to be presented effectively to the public, not in the spirit of propaganda, but in the spirit of acquainting the people with the facts concerning financial support for education.

The stage was set, the time ripe for a statewide publicity campaign. The association immediately established a publicity office and appointed an able, experienced director of publicity. The first task of this publicity director was to see that meetings of citizens were planned. These meetings were held and still are being held.

Meanwhile, the state legislature was in session. The governor commended the report to the legislature, and even more important he recommended a sales tax for three years, the revenue to be distributed on an equitable basis to meet the costs of public education. He also urged the diversion of automobile and gasoline taxes to school support for three years. But, as is usual in bodies of great weight, the legislature moved slowly. Conferences with important groups in the legislature were held by the members of the commission and the survey staff. The commission's recommendations were carefully explained, questions answered and objections met, but still the legislature did not act.

Citizens became increasingly concerned that there should be such procrastination in the acceptance of recommendations which seemed so sound and offered so much hope. Lay friends of education voluntarily organized a Citizens' State Committee on Education. On this committee were represented such groups as the parent-teacher associations, the League of Women Voters, the Association of Business and Professional Women, women's clubs, federated boards of education, the Junior Order of American Mechanics and realtors. Working through an executive committee, this citizens' committee formed an organization in every county, continued to hold meetings, made contacts with the legislators and vigorously supported legislation to make the commission's recommendations effective.

Although nearly a year has elapsed since the report was made public, it is impossible to point to any concrete legislative action. That such action is desired is clearly indicated by the temper of the people. Some definite progress, however, has been made. A bill known as Assembly Bill No. 169, which embodies the "equalization plan" proposed by the commission has been passed by a vote of 42 to 10 in the assembly, and as this is written, it awaits favorable action in the senate.

The commission refused to specify the new tax or taxes which should in part replace the property tax. The commission felt that it had finished its task when it had pointed out the need and that the decision as to the type of new tax or taxes should be left to the legislature. The state teachers' association has taken the same position.

Legislature Must Eventually Respond

It is unfortunate that it is impossible to point to much legislative accomplishment up to the present time, but the work is not finished. The campaign to legalize the report of the survey commission has been difficult as it has had to be made in the midst of the depression and in a year of state elections — always a hard time to secure constructive legislation. Furthermore, fundamental reforms come slowly, and the reforms sought by the governor's commission are fundamental. No one in the state is downhearted or disappointed and the drive for legislative action is relentless. The standing threat that some schools in the state cannot continue to operate much longer without a better plan of state support is an increasingly powerful argument for action.

When the recommendations of the survey commission are translated into state law, the benefits to the taxpayers, the schools and the children of New Jersey will be incalculable. Even should we fail for some time to secure these accomplishments, the survey will have served to keep the public highly conscious of the need of reforms in the system of state support during a period when people without guidance or direction on educational matters would likely be destructively critical.

In the end we cannot fail.

Six Problems in Education

By OSCAR L. CHAPMAN
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IN THE present transition period, when we are confronted by almost overwhelming social and economic problems, and when men have begun to question whether a democratic way of life can maintain itself, it is both fitting and proper to consider and discuss the relationship of an extensive program of public education to our changing national pattern.

I sincerely believe that the dream of the forefathers and our own ideals regarding human values and possibilities can be fulfilled, not, however, by wishful thinking and aimless discussion, but rather through the scientific approach. Plans based upon the interpretation of carefully developed data must be translated into policies and working procedures that are in accordance with our fundamental American tradition and twentieth century needs.

Long Period of Reconstruction Ahead

No discussion of present day problems can be considered fundamentally significant that does not include within it a proper place for the activity of education, through which not only our social heritage may be transmitted but also the present generation, both child and adult, may be taught how to think more rationally and more objectively in terms of our ever changing cultural patterns.

The professional educationists who are directly involved in the attempt to administer these highly complicated problems of education have come to the realization, just as we laymen have, that education faces a long period of reconstruction. In this program of change, one of the fundamental considerations in the successful perpetuation of a democratic order of life is the maintenance of the tradition of popular control over public education. The immediate purpose should be a continuation of the program of the continued control and support of education by states. Naturally, this type of organization has its weaknesses. However, these weaknesses are socially also one of its strong values. In practice we must look forward not to a perfect plan or scheme but rather to a rational organization that will be most beneficial to the country as a whole over the longest period.

As I analyze the major problems now confronting education, it seems that they may well be divided into six classifications. Since education is a social activity so fundamentally vital to our civilization, the first step must logically be a restatement of our aims and objectives, or, if you will, a reinterpretation of our educational philosophy on the basis of modern conditions. This restatement of aims must be made in a social manner. As an illustration, in a number of states much has been accomplished along this line through the legally constituted state departments of public instruction, through the professional groups of teachers and through the cooperation of both legal and extralegal agencies. I have been particularly interested in the working out of the Michigan plan under the leadership of Dr. Paul F. Voelker, as described in the August issue of The NATION'S SCHOOLS. In its essence this plan represents the most intelligent type of cooperative group planning, in which all interest groups are logically and rationally represented. It represents the democratic procedure where the plan arises out of local realization of need and is followed by a willingness to cooperate in meeting that need.

Tax Systems Are Being Overhauled

The second reorganization problem lies in the field of finance, and there our educational difficulties have been due to two factors. First, the outworn system of taxation by which the major burden has fallen on real property; and second, our traditional assumptions regarding the financing of capital improvement by long-term and injudicious borrowings. Happily, again, there is room for optimism in this field. Slowly, the states are, one by one, beginning to overhaul their tax systems, and I have every confidence that within a relatively short period many of the weaknesses of our lopsided taxation plans will be corrected, and all the wealth of each state will be subjected to a rational levy for educational as well as for other governmental purposes.

In the original plans under which public education was popularly organized the units of administration were planned for frontier conditions. Unfortunately, little thought was given to a proper realization of the need for constant and periodic review of changing requirements. Because of this neglect, our school organization lines became traditionally static and fixed, until in popular opinion

the arbitrary limits of the school district represented something almost sacred, rather than a mechanical agency that should be flexibly subject to changing needs.

It must surely be apparent to the specialists in school administration that one of the big problems to be solved before we can have adequate housing is the reorganization of the administrative units known as school districts. We need fewer and larger units. To the layman it seems as if the smallest district of the future must be the county, and, in the more sparsely settled sections, a combination of counties. It is also apparent that the time-honored but functionally inaccurate division of education into urban and rural administration must undergo radical change. We can no longer arbitrarily set off lines of demarcation, and say, "Here ends the city and here begins the country." In reality, it will be much more logical to build up attendance districts within the county administrative unit in terms of sociologic and economic needs rather than on the basis of an outworn tradition. Incidentally, we must all remember that while under current conditions there are 107,000 rural districts, yet approximately 70 per cent of the children in all types of educational institutions are housed in the village, town and city districts.

The educationist will recognize that the most important problem in education is the securing of an adequately trained supply of teacher and administrative personnel. The complicated problems of the instructional process appear to me to demand at least four years of training beyond the high school for positions in elementary education, and five or six years beyond the high school for positions in secondary education.

Weeding Out the Poor Training Centers

A number of states are already giving serious consideration to improving their all round personnel, and are taking steps progressively, on the basis of field survey, to eliminate weak and inadequate training centers. It seems that the states should definitely produce teaching personnel only in relationship to determined need so that there may be no recurrence of the present serious dislocation between supply and demand.

One of the oustanding characteristics of the American system of public education is its concept and practice of popular control. Since this element is desirable for retention in any forward looking plan of reorganization, it might be well at this point to call attention to the fact that, under our plan of procedure, the school will be just as effective, just as efficient and just as adequately supported as the degree to which the people are educated to its worth, condition and needs. In other words, professional educators have, for much too long a period, neglected the field of social interpretation of the schools to the public. I am thinking of social interpretation as a plan of continuing, extramural, popular education by which school and community are kept in understanding and sympathetic relationship. Unless we do recognize and meet the responsibility of such education of the public, all reorganization and all change will be of relatively little avail.

The sixth problem is concerned with that whole series of intricate and specialized fields of school plant location, designing, construction and use. Since the plant is a facilitating agency and therefore secondary in the educational process, it cannot be considered apart from the problems of philosophy, program, finance, administration and personnel. In order to serve its purpose effectively it must complement them. The immediate problem in this field seems to be the maintenance of the existing plant at the level of efficiency essential for successful use. The long-range problem is a development in each state of a program of planning that parallels the solution of the other problems previously considered. My major interest lies primarily in long-range planning.

Planning for the Future Plant

Long-range planning is not a piece of haphazard work that can be done by the manipulation of simple and ofttimes misleading and incorrect statistics without reference to the broader field of functioning. Organized by states, under the direction of the legally constituted state education authorities, directed by specialists in the field of economics, political science, geography and sociology from state institutions of higher learning, long-range planning for the physical plant is not a simple problem that may be solved within a few weeks, but rather one that will undoubtedly require several years to complete and much longer to make effective. It must take into consideration not only the vital elements and implications of the preceding problems but also land use, industrial conditions, technological change and population composition and trends. It cannot be accomplished by the translation of inadequate information and hastily accumulated data to mechanized and inadequate form sheets.

Adequate surveys on small scale have been made through state, local and federal cooperation, and some of these are available through the Office of Education. It must be obvious that plans calling for the investment of large capital sums must be fundamentally sound, functionally correct and sufficiently detailed before the expenditure of public monies for these purposes can be granted.

Word Knowledge in the Grades

By EDWARD L. THORNDIKE
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ALL competent thinkers will agree that one aim of the curriculum of Grades 4, 5 and 6 is to increase the vocabularies of the pupils. Concerning the relative importance of this aim in comparison with others there will, of course, be different opinions. But even those who would rate it lowest in comparison with, say, knowledge of real things and processes, skill in practical and fine arts, habits and attitudes, moral value and powers of healthful and noble appreciation and enjoyment, would still value it highly and condemn a school that did not attend to it. Even the least literary and least scholarly among them would require that children learn enough words to understand the words of the textbooks they will use in Grades 7 and 8, and of the discussions by teachers and pupils they will hear there. Competent thinkers would also require that the child make substantial progress toward such a vocabulary as will enable him in his teens to read books and articles suited to his intellectual abilities and to his practical and esthetic needs.

Two Methods of Increasing Vocabulary

The requirement will, of course, vary for children of various abilities and interests, say from 5,000 words to 11,000 words at the end of Grade 6, not counting derived forms ending in s, ed, ing, ly, er and est.

Some children may acquire as large vocabularies as they need by hearing and speaking; reading in and out of school is for them only a translation of visual symbols into auditory. But they are few; the conversation of the home and street and school does not teach most children the words they need to learn. They must learn many as a by-product of reading or from deliberate word study. From 1,000 to 4,000 or more words must be so learned in Grades 4, 5 and 6 by most pupils in order to make the progress desirable for them in this respect.

Theoretically they might be learned and kept in memory by the deliberate study of separate words plus a small amount of reading of sentences and paragraphs to show their use, after the fashion of foreign-language books of a generation ago in which a thousand words were learned in lots of ten or twenty, reviewed from time to time, and used in perhaps 50,000 words of reading. Such a procedure is not tolerated in the learning of English words in our elementary schools. But a procedure like it in certain important respects is rather common. This is to teach the meanings of certain words present in a certain story, poem, description or other piece of English, before it is read as a preparation, while it is being read as an aid to understanding and enjoyment, or after it has been read in questions and tests, as an aid to retention for later use. In all three procedures the meanings of separate words are learned, though the isolation from the context is not so extreme as it was in the foreign-language books mentioned.

When a teacher tells a word's meaning or a pupil hunts for it in notes, glossaries or dictionaries, there is always a certain substantial amount of teaching and learning of that word regardless of its context. The case is very different from the incidental learning of meanings by reading in which a pupil goes along getting the facts or enjoying the story as well as he can without working at the meaning of any word separately. Theoretically it would be possible for a pupil in Grades 4 to 6 to learn all his 2,000 or 3,000 words in this second fashion as by-products of reading for knowledge and entertainment, with never a look at a glossary or question to his teacher. The reading would have to be selected with care and ingenuity to make sure that the contexts did give the meanings.

Either Method Has Its Weaknesses

Each method has its advantages and weaknesses. Studying words more or less by themselves prevents erroneous guessing, gives quick results and should give a more adequate and better organized knowledge of a word than the mere reading of a few sentences containing it, weeks or months apart. But the learning takes time and effort and tends to be somewhat stiff and pedantic; moreover, a mass of knowledge piles up with little opportunity for keeping it alive, if the number of new words per thousand words read is as large as it is in school readers. Learning words from their contexts in actual reading gives word-knowledge as a by-product, guarantees that the word, if learned, is learned as it actually functions, and provides a natural means of keeping knowledge of meanings, however acquired, alive and active.

The matter of continued use of word-knowledge in further reading in order to retain it is obviously important. The amount of reading (or reading and hearing) necessary for this is a matter concerning which until recently even expert English teachers had only vague notions.

Suppose the pupil learns from the glossary of a widely used sixth-grade reader the meanings of *aft, alabaster, annihilate, antelope, aromatic, artisan, astronomy, atom, audacious, august, bauble, bright, braggart, brawn, bulrush, buoyant, buzzard* and *caliph*. Reading thirty pages a day will cause him to meet the most used third of these words from three to five times a year, the next most used third once or twice a year, and the least used third less than once a year. That is, a person reading 2,750,000 words a year still does not meet such words often. The natural tendency of even expert teachers of English has been to suppose that in a million words of miscellaneous reading words like *antelope, aft, light* or *braggart* (which are in the thirteenth, fourteenth, fifteenth and sixteenth thousands of the Thorndike list) will occur at least a few times. But a word has to be as high as the ninth or tenth thousand if it is to occur once in a million.

Small Vocabulary Prevents Pleasure Reading

The fact is that word knowledge acquired in school in connection with school readers or other books used in classes in English is likely to waste away unless there is a large amount of supplementary reading done for the school, or voluntary reading done for personal interest, or both.

In the case of the top third of pupils in respect to intelligence and ability to read, a large enough amount will be done if interesting books and magazines and time in which to read them are available, and if the habit of voluntary reading is encouraged by well chosen supplementary reading in school. But in the case of the middle third and still more in the case of the lowest third, the provision of all the books in the world and of abundant leisure time may not suffice. The reason for this is that the books and magazines which would interest them if they could read them easily are so hard, especially in the sense of having so many unknown words, that they cannot; and that the books which are easy enough are too babyish for them in content. For example, a dull and nonliterary boy of thirteen or fourteen in Grade 6 cannot read "Treasure Island" or "Hans Brinker," and does not wish to read Grimm's "Fairy Tales." If he has enough interest in the content, such a child will endure occasional frustrations from unknown words, but if they are too frequent he will give up; if he is induced to continue, the reading will be hard work.

Such frustrations of the lower two-thirds in reading ability must be reduced if they are to do enough voluntary reading to retain their knowledge of the words taught in school classes. Either new books must be written with limited vocabularies or existing books must be modified to meet their needs. We may profitably think of the vocabulary of a book for voluntary reading by any given pupil as consisting of four classes: (1) words so well known that they offer no difficulty and perform no educational service save that of insurance against possible weakening of this knowledge; (2) words well enough known to offer little or no difficulty and perform the service of maintaining and perfecting the knowledge of their meanings; (3) words ill known or unknown, the meanings of which are partly or wholly taught by the context so that they perform the service of increasing vocabulary and of doing so in a sound and "natural" way; (4) words ill known or unknown which thwart and annoy the reader, hinder comprehension and enjoyment and cause pernicious errors in the pupil in question.

The popular juvenile books of the past have a large proportion of words of Class 3 for the ablest third, but many of these same words are in Class 4 of the majority of the pupils. In general, as will be shown in a series of studies in the *Teachers College Record*, the vocabulary of books for children is not well adapted to the middle third in reading ability, and still less to the lowest third.

Hundreds of New Books Needed

We need hundreds of books for children in Grades 4, 5 and 6 like existing juvenile books in the knowledge given and interests appealed to, but with their vocabularies restricted somewhat as follows:

Set A. Using the 2,500 commonest words plus such others as are taught by the context or are desirable for special reasons.

Set B. Using the 3,500 commonest words plus such others as are taught by the context or are desirable for special reasons.

Set C. Using the 4,500 commonest words plus such others as are taught by the context or are desirable for special reasons.

I have prepared modified editions of certain children's classics in accordance with these specifications to the extent of eighteen volumes (six each of A, B and C above), totalling about 1,500,000 words. I hope others will extend this work until every pupil in Grade 4 can be referred to fifty books which he can read with enjoyment and which will keep him from continually falling further and further behind in vocabulary; and similarly for pupils in Grades 5 and 6.

Teaching Spelling in Rural Schools

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Backs to the wall, the conventional position for rural spelling classes.

DURING the last generation great strides have been made in the solution of educational problems by the application of scientific methods. The field of spelling has been the seat of tremendous activities. Watson reports the analysis of 339 separate publications relating to spelling. Horn has taken 133 bibliographic references as the basis for his spelling "principles," and Tidyman includes 187 articles and books in his bibliography.

In spite of the evident interest, the application of scientific methods and the large number of investigations, a satisfactory solution of adequate teaching and learning of spelling words seems remote. A similar statement could be made concerning the investigations and discussions of achievement in consolidated and small rural schools.

During the first semester of the school year 1931-32 an investigation was undertaken that involved a study of the comparative efficiency of teaching spelling in four types of rural schools and a comparison of the Test-Study Method of teaching spelling with the Study-Test Method.

At the beginning of the fall term of school in August, 1931, a fifty-word spelling test for each grade — two to eight, inclusive — together with instructions for giving the test was sent to the teachers in 135 schools in Weld County, Colorado. Included were all the teachers in the county except those who teach in the county seat, Greeley.

The fifty words for the test were selected at random from the Horn-Ashbaugh list for each grade from the words to be studied during the first half of the school year. The first test was given before any classroom work had been done in spelling. Near the end of the first semester, a second fifty-word test of comparatively equal difficulty selected in the same way was sent to all the schools.

The words in this second test were chosen from those that had been studied by the pupils of the respective grades during the first half of the year. This test was given during the second week of January, 1932. All the test papers were graded by the spelling teachers, and the grades were reported on special blanks supplied for that purpose.

TABLE I—ENROLLMENT BY GRADES IN THE FOUR TYPES OF SCHOOLS IN WELD COUNTY, COLORADO, GIVING THE SPELLING TESTS—1931-32

Schools	*Grades*							
	2	*3*	*4*	*5*	*6*	*7*	*8*	*Totals*
1. One-teacher.....	112	120	97	109	117	84	102	741
2. Two-teacher.....	198	197	188	199	195	142	133	1,252
3. Three-teacher.....	167	149	161	128	95	109	80	889
4. More than three-teacher.....	863	869	820	804	723	666	602	5,347
Totals.....	1,340	1,335	1,266	1,240	1,130	1,001	917	8,229

The number of pupils who took both tests is reported by grades and types of schools in Table I.

This table should be read as follows: There were 112 second grade pupils tested in the one-teacher schools; 198 in the second grade in the two-teacher schools, and 167 in the three-teacher schools. As previously indicated, this classification of schools was made to compare the efficiency of teaching spelling in the different sized rural schools.

The results of the two tests are recorded in Table II. The average gain in points for each type of school is listed in the last column of Table II. The average number of points made by the pupils in the three types of small schools is 4.36 below the gain made by the pupils in the larger schools.

TABLE II—GRADES MADE IN THE TWO SPELLING TESTS, PERCENTAGE OF WORDS SPELLED CORRECTLY AND PERCENTAGE OF IMPROVEMENT IN THE FOUR TYPES OF SCHOOLS IN WELD COUNTY, COLORADO—1931-32

Schools	Grades 2	3	4	5	6	7	8	Average
1. One-teacher								
Second test	64.7	75.3	78.3	80.1	75.4	79.8	74.1	69.67
First test	34.6	40.3	49.2	57.0	55.8	58.6	48.9	49.20
Gain	30.1	35.0	29.1	23.1	19.6	21.2	25.2	26.18
2. Two-teacher								
Second test	67.4	76.1	78.8	80.9	81.1	82.4	83.6	78.90
First test	30.8	41.1	52.5	59.4	60.9	58.2	62.1	52.14
Gain	36.6	35.0	26.3	21.5	20.2	24.2	21.5	26.50
3. Three-teacher								
Second test	70.9	72.9	79.4	82.6	77.9	82.1	82.8	78.37
First test	32.8	43.9	49.9	54.4	53.2	58.6	63.2	50.88
Gain	38.1	27.0	29.5	28.2	24.7	23.5	19.6	27.22
4. More than three-teacher								
Second test	69.1	70.5	79.4	79.8	81.1	83.6	80.8	78.90
First test	25.4	32.2	54.1	55.9	52.4	52.7	52.9	46.71
Gain	43.7	38.3	25.3	23.9	28.7	30.9	27.9	31.24
Average Gain	37.21	33.82	27.2	24.02	23.3	24.95	23.55	27.77

It will be noted that the average grades made on the first test by any of the seven grades vary only slightly with the type of school, yet the results of the second test show an advantage in favor of the larger schools except in the case of the fourth and fifth grades, where there is a slight advantage in favor of the smaller schools. There is nothing in these data to show why there is this slight difference in favor of the fourth and fifth grades in the small schools.

The greatest achievement made by any grade in any type of school in the county was made by the pupils in the second grade in the schools with more than three teachers. The third grade in the same group of schools made a gain of 118.9 per cent. This achievement was nearly approximated by the gain of 116.2 per cent made by the second grade pupils in the three-teacher schools. In every case the second, third and fourth grades in the four types of schools showed the greatest average improvement.

The average score for all grades in the four types of schools and gain per cent made by each grade is presented in Table III. The second grade made a gain of 120.0 per cent, which is 29.95 per cent above the gain made by the third grade, which ranks second in the percentage of gain made.

TABLE III—TEST GRADES AND ACHIEVEMENT IN PER CENT IN GRADES 2 TO 8, INCLUSIVE, IN WELD COUNTY, COLORADO SCHOOLS—1931-32

Tests	Grades 2	3	4	5	6	7	8	Average
Second	68.02	74.82	78.97	80.84	78.87	81.97	80.32	74.83
First	30.90	39.37	51.17	56.68	55.57	57.02	56.77	49.64
Gain per cent	120.0	90.05	54.32	42.61	41.92	43.75	41.48	62.02

The fourth grade ranks third in achievement with a gain of 54.32 per cent, which is 35.73 per cent less than the gain made by the third grade and 65.68 per cent less than the gain made by the second grade. The fifth grade improvement was excelled by 1.14 per cent by the seventh grade. The sixth and eighth grades made practically the same gain, 41.92 per cent and 41.48 per cent, respectively.

The average gain made by all pupils in each of the four types of schools is shown in the final column of Table II. The greatest average gain was made by the pupils in the schools with more than three teachers. The least gain was made in the one-teacher schools. The amount of difference in gain made by the one, two and three-teacher schools is not great. A difference of only 1.04 points covers the gain made by the three types of schools. However, the difference in the gain of 4.61 points made by the group with more than three teachers was appreciably above the gain of the other groups.

These facts lead us to believe that insofar as this study is concerned the average achievement made by pupils in the larger schools is appreciably superior to that in the smaller schools.

In a number of schools over the county the teachers preferred to use the Study-Test Method. The results of the tests from this group of schools are striking inasmuch as they furnish, so far as this investigation is concerned, conclusive evidence of the superior results of the Test-Study Method.

TABLE IV—RESULTS OF THE TWO SPELLING TESTS IN THE WELD COUNTY, COLORADO, SCHOOLS USING THE STUDY-TEST METHOD OF TEACHING SPELLING, 1931-32

Tests	Grades 2	3	4	5	6	7	8	Average
1. Second	45.7	66.4	73.7	73.7	61.4	77.0	76.0	65.98
2. First	27.5	55.8	57.0	73.2	51.9	62.8	65.0	56.17
Number of pupils	47	42	40	38	28	26	15	
Per cent of gain	102.1	18.9	29.3	.006	18.3	22.6	16.9	29.7

The results of the tests for a group of schools using the Study-Test Method are shown in Table IV. The schools are taken from the one, two, and three-teacher types without any representation from the fourth group. A comparison of the results

A lone prairie schoolhouse with rural touches at left and right. In contrast is the consolidated school with its fireproof construction and some equipment for the playground.

obtained in the schools using the two methods of teaching spelling disclosed some interesting facts. In case of the fifth grade, the schools using the Study-Test Method were able to make a gain of only 0.5 per cent, the lowest made by any grade. There were only thirty-eight pupils in this grade-group, which detracts somewhat from the reliability of the results. However, these thirty-eight pupils were taught by eighteen teachers in ten schools in various parts of the county. Pupils of the same grade in the group using the Test-Study Method made a poorer showing than any of the grades except the sixth and eighth. By referring to Table II, it will be observed that the fifth grade pupils in the same three types of schools made a gain of 24.02 points, or 23.7 points more than the gain made by the same grade in the group using the Study-Test Method. Fifth grade in both groups showed poorly. The average gain for all grades in the schools using the Test-Study Method was 27.77 points. The other group made an average gain of 11.52 points, or a difference of 16.25 points in favor of the group using the Test-Study Method.

The gains made by the pupils in Grades 2, 3, 4 and 5 are superior to the gains made by the pupils in Grades 6, 7 and 8. These facts are in harmony with the findings of Kratz, Buckingham, Hornbaker, and Tidyman. The improvement in the third and fourth grades is more than twice as great as that in the fifth, sixth and seventh grades. The conclusions seem to favor the stressing of spelling in the lower intermediate grades.

The problem of this investigation was twofold. In the first place, the study was undertaken to determine the relative efficiency of teaching spelling in large and small rural schools. In the second place, the study was an inquiry into the effectiveness of the Test-Study and Study-Test Methods.

Two tests of equal difficulty were given to the pupils in Grades 2 to 8, inclusive. One test was given before the words were studied and the other after the words had been studied in class. The results are as follows: (1) Greater gains in spelling achievement are made by the pupils in the second, third and fourth grades. (2) Achievement in the larger schools is notably superior to that of the small schools. (3) The Test-Study Method of teaching spelling is superior to the Study-Test Method.

Do Consolidated Schools Cost More?

By HARRY A. LITTLE
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THERE are in the United States today a great number of small public schools despite one hundreds years of advocacy of larger consolidated schools. This situation is due in part to the educational philosophy of school officials and to the traditional attitude of school patrons, but it is also due in part to the lack of scientific information as to the exact results to be expected from the consolidation of schools.

At present there are 127,244 local school districts in the United States with an average of about 200 children enrolled in each unit. Thousands of these schools, however, have enrollments of less than 10 children and cannot offer a complete program of education with so few pupils. There are 424,000 school board members and 839,879 teaching positions, or about half as many school board members as teachers.

Slow Growth in Consolidation

There are still about 150,000 one-teacher schools in the United States. It is difficult, if not impossible, for one-teacher schools to offer modern educational training, yet almost one-fifth of all teachers must work under such conditions. The number of consolidated schools increased from 11,890 in 1920 to 17,004 in 1930. This is a slow growth.

The best form of reorganization of schools seems to be the type based on a survey of an entire county. I have recently made a study of 223 such county surveys to determine what potential economies there are in the reorganization of schools.

Economies cannot be said to be possible unless the reorganization that would effect them is feasible and unless due consideration is given to community requirements and to geographical barriers. The most practical type of reorganization program for rural and village schools seems to be the programs proposed in the school reorganization surveys which include all the territory within a county and are made after consideration of local needs.

In the study that determined whether or not the reorganization would result in a decrease or an increase in cost, the number of teachers required to staff the school according to average current practice was determined, both for the present organization and for the proposed reorganization, based on the average cost of schools per teaching unit and the average cost of transportation within the state.

The study reveals that in 213 of 223 counties reorganization will result in an actual decrease in cost, the average decrease in cost for the entire 223 counties being 7.8 per cent of the original cost. If only the rural schools are included in the basal percentage, the mean average decrease is 9.2 per cent.

Because rural children must be taken to school before they can be taught, rural schools will always cost more in teaching units than the same number of pupils would cost in city schools where the schools could be large enough to give each teacher a full teaching load and where no transportation would be required. In the counties studied the schools as they are now organized cost 1.36 times as much as they would cost if the same pupils were enrolled in school systems in which no elementary school had less than 290 pupils in average daily attendance and no high school had less than 726 pupils in average daily attendance, and where no transportation was required. If these schools were reorganized according to the principles proposed in the surveys, the cost would be 1.25 times the proportional cost of the larger schools.

The reorganization of schools makes possible many opportunities for better educational advantages which, if utilized, may increase the cost of the educational program. The better buildings required to put the reorganization proposed by these surveys into effect would result in an additional cost on the average of 3.8 per cent of the original cost of all the schools of the county.

Why Reorganization Costs Vary

Three factors seem to affect the variation in cost resulting from the reorganization of schools: (1) the amount of consolidation that previous reorganization, natural barriers, community prejudice and other limiting factors will permit; (2) the density of population as determined by the number of farm and village children per 10,000 acres of farm land, and (3) the number of children per school.

My study seems to reveal quite definitely that any increased cost that may have resulted from consolidated schools over the country is largely due to a better school program rather than to the consolidation of schools. The additional cost for transportation is usually more than offset by the decrease in the number of teaching units required.

Two Educational Philosophies—Are They Compatible?

By W. HARDIN HUGHES
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The "new school" will provide for individual differences. It will take into account more than the narrow scholastic abilities of children. Emphasis will be placed on the ways in which fruitful learning may be acquired. Scientific measurement will not be discarded but will be practically developed in the field of personality

SINCE the beginning of the century two rather distinct philosophies of education, together with their corresponding practices, have been developing side by side in American schools.

The one is concerned with the fundamental facts and skills of education; the other, with the fundamental attitudes and interests of the learner. The former emphasizes the measurable outcomes of scholastic learning; the latter, the more intangible traits of personality. While neither school of philosophy and practice has entirely neglected the aims insisted upon by the other, each has employed some methods and procedures that are peculiarly its own.

Formal education has ever reflected, though somewhat tardily, the prevailing practices of the outside world. In periods of military organization and drill, for example, the practices of the school have been correspondingly militaristic in character. Witness the "lock step," in its myriad forms, so characteristic of an earlier education. Evidences of this type of school practice may still be seen in straight rows of immovable seats and in silent lines of children as they move about under the despotic rule of their teachers.

Borrowing From Industry

Monarchy, democracy, mobocracy — each has left its imprint on the cumulative practices of education. In the school as in every other institution of society, inertia resists the introduction of the new; but when a given phase of inertia has once been overcome, the school proceeds at once to cling tenaciously to whatever has become established. This, in large measure, accounts for the hodgepodge of obsolete practices so prevalent in social institutions in general.

Twenty years ago some of the younger leaders of educational thought were studying the practices of the industrial world with a view to appropriating such principles of management as seemed applicable to education. In the Twelfth Year Book of the National Society for the Study of Education (1913) Dr. Franklin Bobbitt set forth the principles of industrial management as they seemed to apply to the problems of the city school.

"The world of material production," he declared, "cannot so much as begin its work until it has definite plans and specifications as to the nature of the products required." He stated as a general principle that "where the material that is acted upon by the labor processes passes through a number of progressive stages on its way from the raw material to the ultimate product, definite qualitative and quantitative standards must be determined for the product at each of these stages of production." The foregoing principle, Doctor Bobbitt maintained, is equally applicable to educational management.

Educational measurement was then in its infancy. In only a small number of school subjects, and these of a more or less mechanical nature, had standardized tests been devised. Rice had experimented with his spelling scale; Courtis and Stone had produced scales for the measurement of arithmetical abilities; Ayers and Thorndike had each devised standards for determining qualities of penmanship; Hillegas and Thorndike had constructed a tentative scale for the measurement of merit in English composition.

These, in short, were the meager beginnings of a movement that had for its primary purpose the scientific measurement of classroom products. Almost immediately the movement was under way, gradually gaining in breadth and momentum. Only recently, however, have we begun to make any real progress in the measurement of the finer and more intangible outcomes of education. We are still seeking improved techniques for refining our estimates of attitudes, appreciations and ideals.

"The higher, however, must be scaled," insisted Doctor Bobbitt in the year book to which I have referred. "However difficult it may seem to set up quantitative standards in the more intangible fields, it must of necessity be done, if once they are introduced into the lower, more objective and more mechanical forms of training. It will work harm," he continued, "to establish definite standards for only a portion of education, leaving the rest to traditional vagueness and uncertainty of aim. . . . But education must take care of all desirable aspects of human personality — training and developing each in due proportion, slighting nothing, neglecting nothing, giving unduly large or unduly small attention to nothing."

The Measuring Rod Applied to Management

But we could not wait for techniques of measurement on the higher levels. Although the measurable products of the classroom were few in number, we could measure them fairly well. School surveys immediately took on a new aspect. Expert surveyors could now show that City A was superior to City B but inferior to City C with respect to the norms of arithmetical accomplishment. They could show in similar fashion the comparative standards attained in a limited number of other subjects.

One of the major surveys to make intensive use of the new techniques of educational measurement was the Cleveland Education Survey (1916). Doctor Judd's special section of this survey was entitled "Measuring the Work of the Public Schools." Enormous variations in achievement from school to school were graphically as well as convincingly shown in this report. Scarcely any mention was made, however, of the differences in mental abilities that probably accompanied and, to a considerable extent, accounted for these variations in school achievement.

"It becomes necessary at times in reporting the results of the tests," we read, "to criticize the schools which are below the average or are irregular in their instruction. . . . The evidence that improvement is possible has been found in the fact that neighboring schools and grades are now doing superior work. Every adverse criticism based on comparison thus implies praise of the good schools and the excellent work which furnished the basis of comparison." We were not yet taking into account in any scientific way the differences in potential abilities for school achievement. Without this we could justly apportion neither praise nor blame for the variations of classroom products.

But the purposes of measurement at this period of the movement were primarily managerial. Boards of education wished to know how poor was the general level of accomplishment in their school systems in order to justify the prospective dismissal of unpopular superintendents. Superintendents, on the other hand, just as frequently welcomed the surveyors in order to prove to the local boards and communities the superiority of the products of their schools. Schools as well as school systems were adjudged efficient or inefficient on the bases of these partial and inadequate measures. And at a somewhat later date, when surveys by outside specialists were becoming less frequent, the use of standardized tests was continued in city schools for similar managerial purposes.

In the meantime, another managerial practice of far-reaching effect was introduced into the schools. Almost immediately after the signing of the armistice, the Army Alpha Test, which had been given to approximately two million soldiers as an aid to their classification, segregation and promotion, was administered to thousands of students in universities, colleges and secondary schools.

Intelligence Tests Rise to Prominence

Shortly afterward there appeared a modification of the Army Alpha Test in the form of the National Intelligence Test for use with pupils in the elementary grades. Other tests of a similar nature were devised and used extensively, each purporting to be a scale for the measurement of general intelligence; but each, on critical analysis, turned out to be something less. On the face of the great majority of these tests it was clearly evident that they had been standardized on the lower capacity levels so characteristic of the other scales and tests to which reference has been made.

Other scientific workers in the measurement field have long recognized the partial nature of our intelligence tests. Dr. E. L. Thorndike insisted from the very beginning that certain essential kinds of intelligence were not at all touched in the ordinary measurement of "general intelligence." More specifically, Thorndike said that there are three types of innate intelligence, namely, intelligence for words and abstract ideas; motor intelligence for the acquisition of skill with the

use of the hands, and social intelligence, or the ability to get along well with one's fellows.

Not only were these major types of innate intelligences recognized at that time, but many of the subdivisions of these types as well. Let us quote Dr. G. M. Whipple (1921) in this connection: "To discover by simply testing that a [gifted] child has an I. Q. of a given amount is interesting, but it fails to get us anywhere in our real inquiry as to just what ones of the various mental functions are possessed of the extraordinary heightened efficiency. Is it memory span or capacity for concentrated attention or ability to handle symbols or apprehension of abstract relations or acute perceptive capacity or lively imagination or originality or breadth of associative tendencies or speed of learning or what, that demarcates such a child from other children? What about his special abilities: does his musical, mechanical, arithmetical, linguistic, dramatic, executive, poetic, artistic and so forth ability exhibit the same unusual development or not? These questions," declared Doctor Whipple, "compel us to plan out an elaborate program of mental testing and to carry this forward on the one individual until we can plot a comprehensive 'psychogram' or 'psychologic profile'."

The "Multiple Track" Paradox

But before the techniques were available for perfecting such psychologic profiling as that suggested by Doctor Whipple, we had proceeded to the wholesale use of utterly inadequate instruments for the sorting of human materials. We were not ready, furthermore, to give the requisite thought and attention to the individual child. We were still in the managerial stages of the measurement movement — still interested primarily in the kinds of classroom product that our crude instruments would measure most reliably.

"Homogeneous" grouping was seized upon as the managerial device which was to make the classroom hum with the efficiency of the modern factory. "Multiple track systems" were established everywhere — double tracks, triple tracks, quadruple tracks, quintuple tracks. There seemed to be no limit to the number of tracks needed if children were to be grouped homogeneously. In at least one of the quintuple track systems it was seriously advocated that the pupils on each of the five tracks be still further grouped within their respective classes into three ability sections, thereby raising the multiple feature to a finer point of perfection. Surely a fifteen-track system would properly care for the individual differences of pupils! But the multiple track system, carried to its logical limits, would ultimately mean individual instruction.

This, in brief, is a fair illustration of the "multiple track" paradox in education. Through common sense observation and scientific measurement we are becoming convinced that all good things do not necessarily go together. Not even the individual is homogeneous within himself. No administrative device, however bolstered by standardized tests and statistical techniques, can possibly ensure adequate provision for individual differences.

Proof of the specificity of human traits and abilities is constantly accumulating. "Although each individual tends to be high, average or low," write Thorndike and Gates, "each may vary considerably in particular traits above and below the average of his own traits. Indeed, although among children of low abstract intelligence high degrees of other talents are relatively rare, we find some who are above the average of the bright children in strength, manual dexterity, emotional control and other desirable traits. The children of poor artistic or musical sense, while averaging a little lower in all other traits than those of fine aptitudes in artistic and musical lines, may nevertheless be distributed over almost the entire range of abilities in other traits.

"Thus we may expect to find children inept in learning arithmetic who are of slow, average or very high competence in music, drawing, athletics, carpentry and other fields less closely related to abstract intellect. This is due to the fact that, while all correlations between desirable traits tend to be positive, some are very small. Despite the general tendency to positive correlation, each individual is a highly specialized organization. Each has his strengths and weaknesses which education should find and take into account."

Trait Differences Are Studied

The foregoing statement has been corroborated by a number of studies which show in quantitative terms something of the variability in amounts of different traits possessed by the individual. On the bases of these we are led to conclude that the "trait differences" within an individual distribute themselves somewhat according to the normal curve of distribution. A study by Hull,[1] for example, in which the reactions of 107 high school pupils are shown on thirty-five psychologic tests "involving a considerable variety of mental functions" concludes (1) that "trait differences" within a single individual tend to distribute as in a normal curve, (2) that such trait differences are about 80 per cent as great as individual differences within the group and (3) that the average individual's best potentiality is from two and one-half to three times as good as his poorest.

[1]Hull, C. L., Aptitude Testing, pp. 45-49.

Other studies bearing on the specificity of human qualities will be mentioned briefly. Robert K. Speer[1] found a high degree of specificity in appreciations of poetry, prose and art. "Classifications of pupils upon any formula thus far extensively used," he concludes, "are, in the light of this evidence of the specificity of learning, extremely unsatisfactory. All formulas known to the writer ignore in their bases many learnings and achievements, important and fundamental, if modern aims and objectives are recognized."

Speer still further declared that, "When worthy abilities, native in origin, such as art judgment and esthetic sensitivity do not correlate at all with intelligence (in the narrower sense), the term 'general intelligence' as applied to the thing measured by the present instruments is a misnomer. When one recalls that music ability and production of art do not correlate with 'intelligence' and that mechanical ability correlates but slightly with 'intelligence,' one may well question the appropriateness of the term 'general intelligence' for the thing measured."

Must Provide for Individual Differences

Similarly, in the studies of Dr. Leta Hollingworth, it was found that "above the level of intelligence required to understand and execute directions, performance in the Seashore Test of Musical Talent is not symptomatic of intellectual endowment. Children in the highest 1 per cent of intellect distribute as random selections." In the same type of investigation by Christensen and Karwoski correlations between art appreciation and intelligence as measured by the Thurstone Psychological Test were all slightly lower than 0.30. The intensive studies of Hartshorne and May[2] in the field of character measurement have shown, furthermore, that within a single trait, such as honesty, its manifestations are specific. One may be honest in one type of situation and thoroughly unreliable in another. Likewise the studies of Newcomb[3] have shown that such traits as extroversion and introversion are correspondingly lacking in consistency within the same individual. Other findings of similar nature have been reported in an increasing number of investigations.

But more and more we are being convinced that formal education must be concerned with the optimum growth of the whole child. "If education is to function," declares Doctor Keliher,[4] "it must concern itself with the behavior of each individual as an integral, evolving, total personality, with likes and dislikes, with fears and complexes, with idiosyncrasies, with strengths, with weaknesses, with skills and with devotions. All of these, and as much more as goes into the make-up of individual children, must be brought into the educational pattern."

One of the chief characteristics of the "activity" classroom is the liberal opportunity provided for varied aptitudes and abilities of children. A well balanced group enterprise calls for contributions of many kinds. Physical expression, artistic expression, literary expression, social expression, constructive expression, dramatic expression and innumerable other kinds of individual and group expression are integrated in the "activity" enterprise. Individual differences of the learners are provided for through intelligent recognition of their special interests, tendencies and abilities and through suitable opportunities for their development along lines that will be profitable both to the individual and to the ever expanding social group of which he is a cooperating member.

Of course there will be grouping in the "new school," but not on the bases of those partial considerations that merely take into account the narrow scholastic abilities of children. There will be standards of accomplishment in this school; but they will be expressed in terms of interests, appreciations and ideals of the learner. Emphasis will be placed not upon the acquisition of information primarily, but, more especially, upon the ways in which fruitful learning is acquired. Scientific measurement will not be discarded, but it will be more practically developed especially in the field of personality.

[1]Speer, Robert K., Measurement of Appreciation in Poetry, Prose, and Art, Teachers College, Contributions to Education, No. 362, 1929.
[2]Hartshorne and May, Studies in Deceit, The Macmillan Company, 1929.
[3]Newcomb, Theodore, The Consistency of Certain Extrovert-Introvert Behavior Patterns, Teachers College, Contributions to Education, No. 382, 1929.
[4]Keliher, Alice V., A Critical Study of Homogeneous Grouping, Teachers College, Contributions to Education, No. 452, 1931.

Traveling Library for Rural Schools

A traveling library service is being carried on in the rural schools of Lee County, Florida. Georgia McFerron, county supervisor, inaugurated the project by securing the backing of the local Business and Professional Women's Club. A committee from the club secured an appropriation from the county commissioners for the purchase of the first books. Pupils in the manual training classes made the required book cases.

The first year's experiment was so satisfactory that the school board has since appropriated funds to carry on the work. There are now twenty-five cases and more than 3,000 volumes in the library, including fifty sets of supplementary readers. The library contains 250 professional books for teachers, several sets of reference books, many government bulletins, sample work books and teachers' helps.

At the close of the school term, all the libraries are checked in, the books mended, and special cases are made up for vacation reading; some cases going into private homes where there are large families, others to teachers who are able to visit their pupils during the summer.

A new school building belonging to a collective farm in the Caucasus region.

Young Russia Goes to School

By WILLIAM CLARK TROW
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PUBLIC education in the Union of Socialist Soviet Republics faces many of the difficulties encountered in other lands, and a few additional ones. Embracing one-sixth of the land area of the globe, the country literally extends from sealskins to Oriental rugs, and the task of providing educational opportunities over such wide areas and among such diverse peoples is a tremendous one.

Such modern inventions as the airplane and the radio are utilized in disseminating information and inculcating socialistic doctrine. And no less an innovation, namely, the instruction of racial minorities in their own language, has obviated difficulties that have perplexed imperialistic peoples for many years. Although the communistic war on religious superstitions has presented many difficulties in Moslem sections, far-away Bokhara seems to take kindly to the Soviet kindergarten.

Education in rural areas has never been too well handled even in the most enlightened countries. In America, the one-room school has in many places been superseded by the consolidated school. But the Russians have gone one step farther and have consolidated their farms! The rural school is therefore a part of the structure of the collective farm and feeds directly into the various trades and occupations of large scale agricultural enterprise.

Another problem, that of public health, has been energetically attacked by Russian educators. With the success of the campaign for the liquidation of illiteracy assured, the way was open for a poster and handbill campaign for cleanliness, better sani-

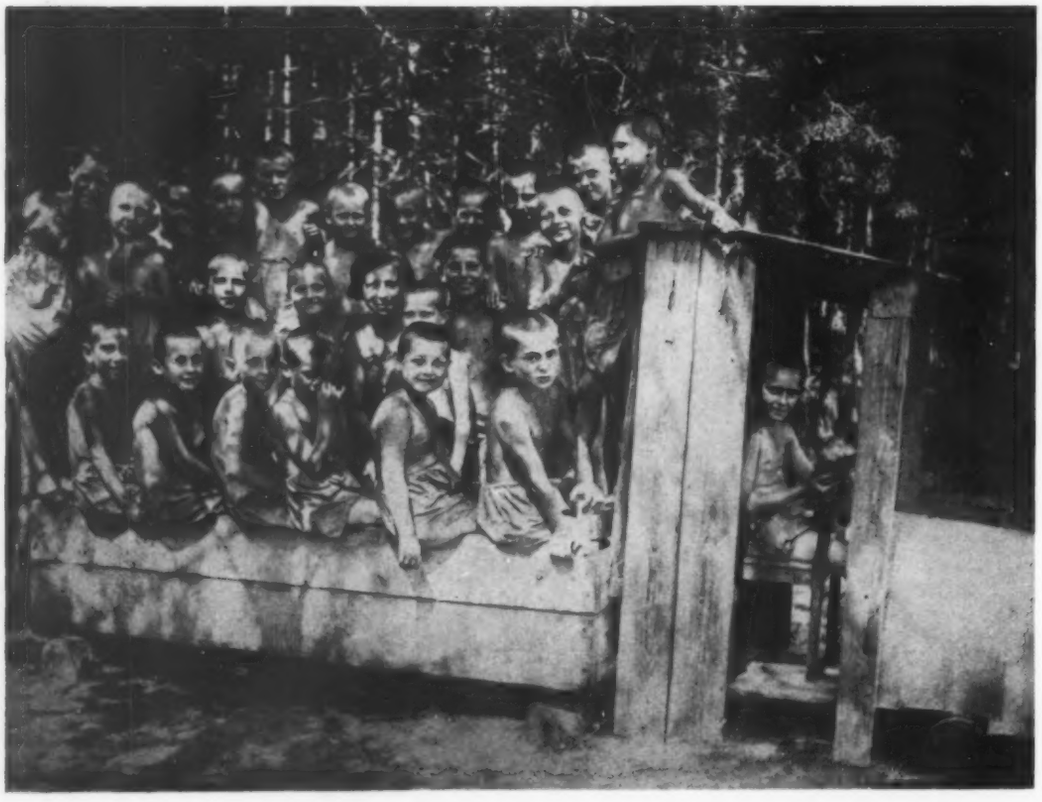
Children's colonies in the country are provided for building up the health of boys and girls from congested areas.

tation, proper infant care and the like. Pictures and printed words were supplemented by personal work — inspections, instruction, discussions and demonstrations given by workers who have taken special courses in hygiene and public health. The crèche is already a recognized part of the equipment of factories and collective farms throughout the Soviet Union.

In addition, many children's colonies in rural and wooded districts have been established, where children from congested city areas may be put on a regimen for building up their health through work, play and rest out of doors.

The problem of pupil freedom in Russia is one that has attracted much attention among American educators. A decade or so ago certain enthusiasts proclaimed that the great day had dawned when they learned that the Dewey principles of self-development and self-direction were becoming embodied in the schools of the new Russia on a scale to be found nowhere else, not even in the land of their enunciation. The project was called the complex, but it was just as good for all that; and the modified Dalton plan permitted the pupils to decide many things for themselves.

Then came the wet blanket, with an extra soaking given it by the reactionaries, calculated to smother any flame of enthusiasm that might otherwise brighten the hopes of American progressives. It was announced that Dewey had figuratively been sent packing out of Russia, and that the fallacies of progressive education were at last recognized.



Where but in Russia would one find children playing at going to work in a truck or lorry!

Children learning to handle a boat at a crèche of the Institute of the Health Commissariat for the Protection of Mother and Child.

Below, children on their wooded school grounds are building a miniature railway ticket office.

Children could not decide themselves into communism any more than they could into fascism.

The explanation, when it came, was simple and obvious, and was necessary only because, as so often happens, judgments had been made and criticism leveled at a stage in the total process, and before all the facts were known. To keep the schools running, teachers trained under the old régime had to be used at first in large numbers. To offset their czarist and individualistic influence, freedom had to be given to the more easily indoctrinated youth. Now that socialistically trained teachers are available, they are given the control that effective teachers must have. The other system ran into regrettable excesses, but it was necessary for the time being. Meanwhile, the complex continues, as does the emphasis upon self-activity and cooperation.

If it is possible to boil down what Russian education, by its methods and curriculum, is trying to do, probably the three words "nature," "industry" and "politics" would serve, provided the two additional ideas, "participation" and "cooperation," are added to bring the whole process into relief.

The child, himself a part of nature

and surrounded by a natural environment, must learn about that environment and about himself. The health campaigns, the field trips and the excursions acquaint the children with the world about them; and true rather than fictional stories of animal life are aimed to arouse their interest in natural phenomena which, for the more gifted, lead on to a scientific career.

It should not be inferred that such excursions are all seriousness with no fun. The radio and an occasional accordion, as well as other musical instruments, often provide entertainment. Play and recreation are given serious consideration by the educational planners of the Russian state, but for the children they are as full of enjoyment as it is possible to make them. Playgrounds and more extensive "parks of culture and rest" for persons of all ages are a part of an extensive leisure time program.

The rich treasures of the museums and art galleries are now open to all, while the Russian worker may enjoy all the best that the theaters and concert halls have to offer, and their offerings are by no means meager.

Even Kindergartens Exalt Industry

Since the U. S. S. R. is the land of the aristocracy of the worker, it is natural that industry should everywhere be exalted. There are the usual school shops found in any enlightened European country, and the kindergarten-primary-age children engage in large scale construction projects.

Perhaps in other lands, as is now being done in Russia, toddlers would be given a boat on rockers to induct them into navigation even though they did not go near the water. But where in the world, outside of Russia, would one find children playing at going to work in a truck or lorry, or with hammer and spikes laying rails on their wooded school grounds for an imaginary railroad train!

Teachers of civics in Russia have one definite advantage over their American colleagues. In Russia, government as practiced is in harmony with political theory, and both are taught and practiced in the schools. The result is that Russian boys and girls do not have to start anew and learn how government is really carried on when they have left their textbooks behind.

History Teaching Shows Great Bias

History instruction, however, gives what an American would call a warped view of the past. That is, it emphasizes the class struggle and the growth of the revolutionary movement toward its culmination in proletarian emancipation and dictatorship. Contradictions that are patent to an outsider though easily understood in terms of in-group and out-group mores are overlooked, or they are summarily explained away on the grounds of necessity. "*Ad maiorem Dei gloriam*" applies splendidly with only a little revision in the third word. The exile of a political revolutionist, for example, belonged to the evil days of the past, while the exile of a noble or kulak constitutes a good deed for the day.

But politics is not confined to regular school instruction. Participation is provided through the youth organizations and these lead up later to membership in the communist party. If an individual has been an activist in the Young Communist or Komsomol group, and before that in his Young Pioneer organization, he has been given the experience of leadership, and will probably become a member of the party, if he so desires.[1]

[1]Character Education in Soviet Russia, Ann Arbor Press, Ann Arbor, Mich., 1934.

Morning inspection of hands by the "monitor on sanitation" at a Soviet Union school.

"Welcome, Pioneers of All Lands." Moscow nursery school children cheer a parade of children's delegations.

Political education does not wait until youth arrives, however. Holidays are celebrated with plays and pageants, when the Little Octobrists, and even the youngest children, are caught in the magic net of mass action and mass participation. All joy and eagerness, they are carried along to their belief in the internationalism of the workers of the world.

With nature, industry and politics as content, and participation and cooperation as means, one hundred sixty million Russians are consciously and conscientiously hewing a new social order out of their philosophy of dialectic materialism. Their trials and tribulations have been many, and their future, like that of all peoples, is by no means sure. Whether or not the final outcome is to be recognized from the blue prints of the present, no one can say.

But in the meantime great numbers of Russian children are having educational opportunities such as they have never had before. Growing up in a changed world, they are taking their new life for granted, for they have known no other. To them, the communist revolution and the civil war that followed are as much a part of history as are Gettysburg and the carpetbaggers to most of us, the Marne and Versailles to the pupils in our schools.

They are living a life shut off from all cross currents of world events that have not been tempered to their supposed needs as communists-to-be. Meanwhile, their elders are slowly bringing their country into the community of nations. As soldiers or diplomats, as scientists or inventors, as writers or musicians, these barefooted young proletarians will be heard from in the future. We shall be using the products of their laboratories, reading their books, playing their music; and we may even be accepting their suggestions and following their lead in the various aspects of social organization.

Intramural and Interscholastic Athletics

Interscholastic athletics among outstanding high schools in the United States are usually confined to only a few sports, most of which have no carry over value in later life, it is declared in a monograph published by National Survey of Secondary Education, entitled "Intramural and Interscholastic Athletics."

The report shows that about two-thirds of the pupils who practice for interscholastic contests actually participate in them, and in certain sports those practicing constitute a small number compared with the pupils engaging in intramural activities in the same sports. There is a tendency in high schools throughout the United States to make a full correlation between intramural athletics and physical education.

There is no indication that the movement of intramural athletics, which came into full swing about 1925, is losing momentum. Of the 327 secondary schools included in the study, 231 reported a program of intramural athletics. As the enrollment increases, the percentage of schools having intramural programs also increases.

In surveying the carry over value of intramural sports, the national survey report implies that games such as tennis, swimming, golf, handball, volley ball, horseshoes, bowling and skating should be encouraged because the pupils can engage in them after leaving school. There is a tendency in American high schools to dovetail closely the programs of intramural athletics and physical education. A few schools are using this type of sport to make habitual certain phases of health instruction.

The report lays down nine goals which seem to be recognized as desirable of attainment in conducting intramural athletics. Among these are the suggestion that full financial support of the programs should be assumed more generally by boards of education; that no physical education credit should be given for participation in intramural sports, as such, unless they are administered definitely as a part of the regular program of physical education; that there should be careful avoidance of eligibility rules which would defeat the objective of "participation by all," and that the sports program should help launch health habits.

Installing a New Course of Study

By GEORGE C. KYTE
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The installation of a course of study requires careful planning. Teachers must be "sold" on the idea that a new manual is needed. Their enthusiasm will be greater if given definite responsibilities in shaping the course. The installation work is a never ending task of the supervisory officers

THE same amount of care must be devoted to planning the installation of a course of study as is given to its construction in order that the teaching staff will welcome the course and utilize it as an important guide. Putting the course of study into operation as an effective instrument is a supervisory activity that requires the teamwork of all supervisory officers. The correct introduction of the course of study is, therefore, a complex and prolonged procedure.

There are two series of steps in the installation of a course of study. The first series should occur throughout the period of construction or revision of the instructional manual. The second should occur during the period following the revision of the course of study. Since both series are essential, complementary phases of supervisory procedure culminating in the efficient use of the handbook by the teachers, each series will be presented.

If each step in planning for and carrying on the construction or the revision of a course of study is thoroughly executed, it serves the rarely thought-of purpose—the sound initial introduction of the course of study to the teachers. Through a variety of means, teachers, principals and supervisors are led to see the need for a new course of study. Hence at the very outset, there is opportunity for the superintendent, the general supervisor, or any other person responsible for initiating the construction of a new instructional manual to emphasize to all persons concerned the use that is to be made of the projected instrument. The inclusion of this viewpoint not only will keep foremost the purpose which is to motivate the work of building the course of study, but will influence its formulation so that it will be constructed to serve this purpose most effectively.

The supervisory officers must convince the teachers that the new instructional manual is needed before work on the course of study is begun. The superintendent of schools, for example, may arouse this viewpoint in the entire staff by reporting and discussing the results of a testing program, by providing opportunities for teachers and others to present and discuss the progressive movement in education, and by holding meetings where the most capable teachers in the system may report to their colleagues outstanding classroom activities which have occurred.

Selection of the committee that is to develop the new course of study is an important step. The teachers who are appointed to the committee should represent schools in all parts of the system, should constitute a cross section of the entire staff, and should represent teaching experience in all grades or divisions to be included in the course of study. Such a committee will be in personal contact with a large part of the teaching staff that is to use the proposed course of study. In this manner these teachers will be kept informed.

Early in the development of the manual, the committee on construction of the course of study should be confronted with the formulation of the educational philosophy which is to indicate clearly the objectives governing the work in the schools. If the aims are to be on a higher plane than those now governing the thinking of the teaching staff, acceptance of the new aims depends upon the insight with which they are received. It is highly important, therefore, that all probable users of the proposed course of study be prepared in advance for the progressive change in their thinking.

Probably no better procedure can be followed than that which involves cooperative preparation of the new statement of accepted educational philosophy. This activity can be done through (1) the formulation of the educational philosophy by the group as a whole or (2) the criticism and modification of a proposed statement submitted to the staff by the committee. In either case the teachers

will, individually and collectively, study educational philosophy. They can then cooperate through discussion or report in the formulation of the educational objectives to be included in the new course of study.

Since there is, perhaps, no more important aspect of teaching than thinking and planning in terms of the educational philosophy which should govern the act of learning, every opportunity should be sought to familiarize teachers with the new statement of aims long before the finished manual is placed in their hands for their guidance. The construction of each major division of the course of study provides ample means for furthering their study of the educational objectives. The formulation of the specific objectives of the particular course of study that is being constructed, the determination and grade placement of essential subject matter, and the outlining of sound teaching methods are illustrative of activities involving both recall and utilization of the general educational objectives.

When asked to aid in determining or criticizing the content of each division, every teacher will be led to study, discuss and advise regarding the guidance to be included for her colleagues and for herself. If the recommendations regarding practice are sound, they will be in keeping with the new objectives. The suggestions lead sometimes to restatements of the objectives on a still higher plane of educational purpose.

Teachers Get Early Chance to Evaluate Course

When the course of study has become formulated to this point, two major activities constituting preliminary installations should have occurred involving all teachers who will be expected to use the course of study as a guide. (1) They will have had numerous opportunities to contribute cooperatively in the development of the course of study. (2) The committee will have reported to the teachers formulations of the sections of the course of study which have been developed through cooperative effort. This gives the teachers an early opportunity to evaluate the material and suggest changes. In doing this they should have two objectives in mind: (a) to make the formulations as sound educationally as possible and (b) to phrase the formulations as clearly as possible.

The next step in constructing the course of study is also the next and signally important step in installing the course. In order that the instructional manual may contain numerous illustrations of good teaching procedures, the teachers should be requested to provide illustrations from their own classwork. These reports of classroom activities may be in the form of a questionnaire to be filled in by the teachers or they may be written records of experimental teaching done by teachers who have been using the tentative formulation of the course of study thus far developed. Both types of illustrations will probably occur in the course of study ultimately adopted by the committee. The preparation of these classroom reports will help familiarize the teachers with the contents of the new course of study.

A Typical Questionnaire

Following is an example of the type of questionnaire referred to above:

"Feeling sure that I can count on the fine professional spirit of the . . . teachers, I am outlining below how to prepare your report or reports of some language teaching which you have just done or will be doing in the months of the school year still ahead. . . . State what the type of language work was that you carried on with your children, being sure to state what grade or grades the pupils are in.

"The account of the language teaching should be about as follows:

"1. Why you considered the activity educationally worth while. What needs of the children in which you were sure they ought to improve did it help to meet?

"2. Why the children were interested in the activity. What purpose did they have and why were they interested in working in the activity?

"3. An account of the activity as it was carried on by the children. What did they actually do and what subjects or subject materials were used by them?

"4. How you guided the children into the various activities in order to get the most out of them; how you guided the children in the improvement of their English.

"5. The outstanding results you noticed achieved by the children through the activity. What language achievements especially were noted and what were other important results?

"6. Samples of the children's work. Examples of their own work as they wrote it and your judgment as to whether you considered it excellent, good, fair or unsatisfactory.

"Please send your reports and samples of children's work to the Language Curriculum Committee. . . . Your help will be appreciated."

The carefully planned report prepares its maker — the teacher — for suggestions with respect to other illustrations of procedure, to usable books, instructional supplies and equipment, and to the outcomes which are to be attained through teaching. During the period that these phases of specific guidance are being developed, it is wise to ask

teachers for their reactions. Their exposure to the tentative suggestions and their criticism of them prepare the teachers for enlightened use of the course of study when it is finally published.

Thus, as the course of study gradually takes form through the cooperative effort of all who will be concerned with its use as a teaching guide, these persons become more or less familiar with its contents. No teacher, of course, will be so familiar with the course that she can dispense with it as a source of ready reference and help. Many teachers will not be as familiar with the contents of the course as some superintendents are prone to expect. Some teachers will not be ready to accept the course as a guide. Anyone who has participated in the development of courses of study after the manner outlined has encountered many teachers who needed considerable additional help in order to acquire the maximum value from the manuals thus produced. The size of the school system is often a factor in this respect, as are also the training, the previous experience and the personal attitudes of various teachers.

The superintendent of schools is primarily responsible for the introduction of the course of study whether it is simply a revision or an initial production. The brief foreword in the course of study should express not only the superintendent's approval of the course but also his understanding of it and his confidence in its merits. The superintendent's faith in the course's value will inevitably influence the attitude of many teachers toward it. His written or oral presentation of the course to the teaching staff also should be impressive.

A Superintendent's Foreword

Following is a superintendent's foreword to a course of study which illustrates the proper type of approach:

"This course of study, as presented, is a revision of the first draft. It was begun in 1928 under the direction of Dr. George C. Kyte of the University of Michigan as part of an extension course in curriculum construction. The first draft was used during the school year, 1929-30. It was revised and completed by the committee during the same year. This revised form is tentative. The need for future modification is recognized.

"Teachers who use this material are requested to make marginal notes of any suggestions, criticisms, or questions that may arise. Only as a course of study is tested through use by classroom teachers can its worth be judged.

"This curriculum was prepared and revised by the supervising and instructional personnel of the Monroe public schools. It is a cooperative effort to bring to our schools the best in accepted practice in order that the adopted educational policy may be more economically and efficiently realized.

"It is hoped that every teacher of geography will contribute to its modification in the ensuing year.—C. W. Crandell, Superintendent of Schools."

If the superintendent elects to present the manual to the teachers formally by means of a teachers' meeting, he can make constructive use of the committee which constructed the course of study and also of the supervisors who are to be in charge of the course. At this general conference, he may announce a plan for releasing committee members from their regular duties from time to time to explain or to demonstrate the use of the new course of study.

Teachers Should Report Results

The manual should contain report forms to be used by the teachers in reporting the strengths and weaknesses of the course of study after they have used it as a guide in teaching. These reports should be made about a half year after the course of study has been adopted. The nature of the report forms should lead to a constructive but critical reaction to the manual. The following items appeared on a report blank of this type which was used by one school system:

1. Parts of the course of study which I find most helpful. (If you can spare the time, tell why they are helpful to you.)
2. Parts which give me little or no help. (If you can indicate how they can be improved, please write your recommendations.)
3. Suggestions or recommendations in the manual which I have found to be questionable. (If you can help the committee correct the weaknesses, it will help other teachers.)
4. Statements in the manual which are not clear to me.
5. Suggestions of new materials, books and activities to be included in the next revision. (If you suggest an activity which you have carried on in your room with success, please use the same form for reporting it as was used last year.)

The principal, the executive head of his school, is in a splendid position to participate in the installation of the course of study in his building. His attitude toward the course will ensure its success or failure in his school. Therefore, the principal should display a keen interest in the course and a desire to assist teachers in getting the most out of it. The manual can well be utilized as the basis of at least one meeting with those teachers in the building who are expected to make use of it. In some school systems, members of the course of study committee are invited to such building meetings to explain the course of study and to answer

teachers' questions. The general supervisor or the special supervisor, depending upon the nature of the course of study, usually is invited to take charge of a building meeting from time to time to discuss the course of study with the teachers.

The principal, in his individualized supervisory activities, has innumerable opportunities to assist each teacher in his school to acquire the maximum value from the course of study. Many of his supervisory observations of teaching may be made with its contents as a basis for diagnosis. Discussions in supervisory conferences also may be based on the course of study. If the principal participates in teaching work, the example he sets in using the course of study as a guide will have a wholesome influence on the teachers.

Since the major responsibility in guiding teachers to utilize efficiently the new course of study rests on the principal, he should be given assistance in obtaining a clear understanding of the new manual. He must be informed, for example, what outstanding changes have been made in the revision. The depth of his insight into the nature of the modifications depends to a considerable extent upon the information given him with respect to significant items, such as (1) the criteria upon which changes were based; (2) the reasons for certain omissions regarding which teachers may need explanation; (3) probable adjustments of some classes due to changes in grade placement or of sequences of subject matter; (4) the phases of articulation or of correlation dependent upon relating the new course of study to others in use, and (5) the recommendations which may require the ordering of new instructional materials, books or equipment.

New Teachers Require Special Attention

Inasmuch as the supervisors work with teachers, numerous opportunities arise in which they may be given an insight into and an appreciation of the value of the new course of study. Teachers' meetings, supervisory conferences and demonstration lessons should be based on the new course. The supervisory bulletins may be so worded that the course of study is kept an integral part of this phase of the supervisory program. This last suggestion is needed particularly by supervisors of special subjects or divisions.

When a new teacher is appointed to the school system she must be given a thorough explanation of the adopted courses of study. The new teacher should be given a set of the courses of study she is expected to use as guides. In many school systems, the superintendent of schools sees that the new teacher receives these manuals. Other superintendents delegate this task to the general supervisor, to the special supervisors or to the principal of the school to which the new teacher is assigned. In the latter cases, the superintendent informs the teacher where she may procure copies of the courses of study. In every case, he offers to discuss the courses of study with the new teacher and advises her to seek help from designated supervisory officers. In the large school system, the superintendent must necessarily delegate this supervisory assistance to other officers.

If his conception of the work of the school principal is sound, the superintendent will entrust a large part of the responsibility to that officer. Many principals prefer to discuss phases of courses of study with new teachers before they begin working in their schools. Conferences are planned by the principals for this purpose. They may request certain teachers to assist the newcomer in a similar manner early in the school term.

Constant Follow-Up Work Required

Special supervisors generally wish to help the teacher to master a particular course of study. While these supervisors should be encouraged in this activity, they must be cautioned that the new teacher cannot give attention to one course of study to the exclusion of another. They must give the teacher ample time to adjust herself to all the manuals, and allow her to concentrate on those most important to her in her work. The new teacher's weaknesses or inexperience should be determined in terms of her previous training and teaching experience. Generally the principal will have to assume leadership with respect to this aspect of the teacher's adjustment.

Each supervisory officer should follow up his efforts at intervals in order to find out whether the new teacher understands the courses of study and is profiting from them. Likewise he is obligated to study the adjustments made by other teachers to the courses of study in order to make certain that they, too, are realizing the help the courses of study are intended to provide. Installation of the course of study is, therefore, a never ending activity of the supervisory officers.

Report Cards Discontinued

Report cards have been replaced by informal, chatty letters telling parents about their children's work in eighteen of the fifty-five schools in Omaha, Neb., according to an announcement recently made. Instead of indicating whether the child passed or failed, the letter specifies the room at which the child is to report for the new semester. At some of the schools, parents, voting at elections, have decided whether or not the use of report cards is to be continued.

Happy To Say —

IN EVERY town known to you, kindness and honesty are abundant. Neighbors help, men give seats to women, communities succor the unemployed, the Red Cross rushes to the aid of the distressed, service clubs assist the crippled, the Travelers' Aid serves the stranger, manners improve. No small credit for this is due to school. When you come to count these cheering signs you get a belief that goodness is the natural tendency of mankind. Fairness is taken for granted. It so fills the human mind that only occasionally, when shocked by some discovery of wrong, does one realize that there is evil in the world. One indignity makes a deeper dent on your spirit than a whole day of fair deals.

THE success of injustice, cheating and all ungenerosity is due in large measure to good men's disbelief that their fellows are intentionally base.

TO INJECT doubt and suspicion into this instinctive optimism of the majority may reduce the damage done by crooks and selfish exploiters who have brought our country to its present unhappy state. Many patriotic Americans have repeated the warning of Jefferson that those who use the delegated power of the people must be watched with suspicious vigilance by the citizen. Cincinnati Reformer Charles Taft holds that school should educate the coming generation to develop righteous wrath. We are now in a time when this is sorely needed.

ON THE other hand you need to beware of cutting down the nation's supply of happiness. Who can say that teaching people to unite and organize to make the good prevail is not a sure way toward prosperity?

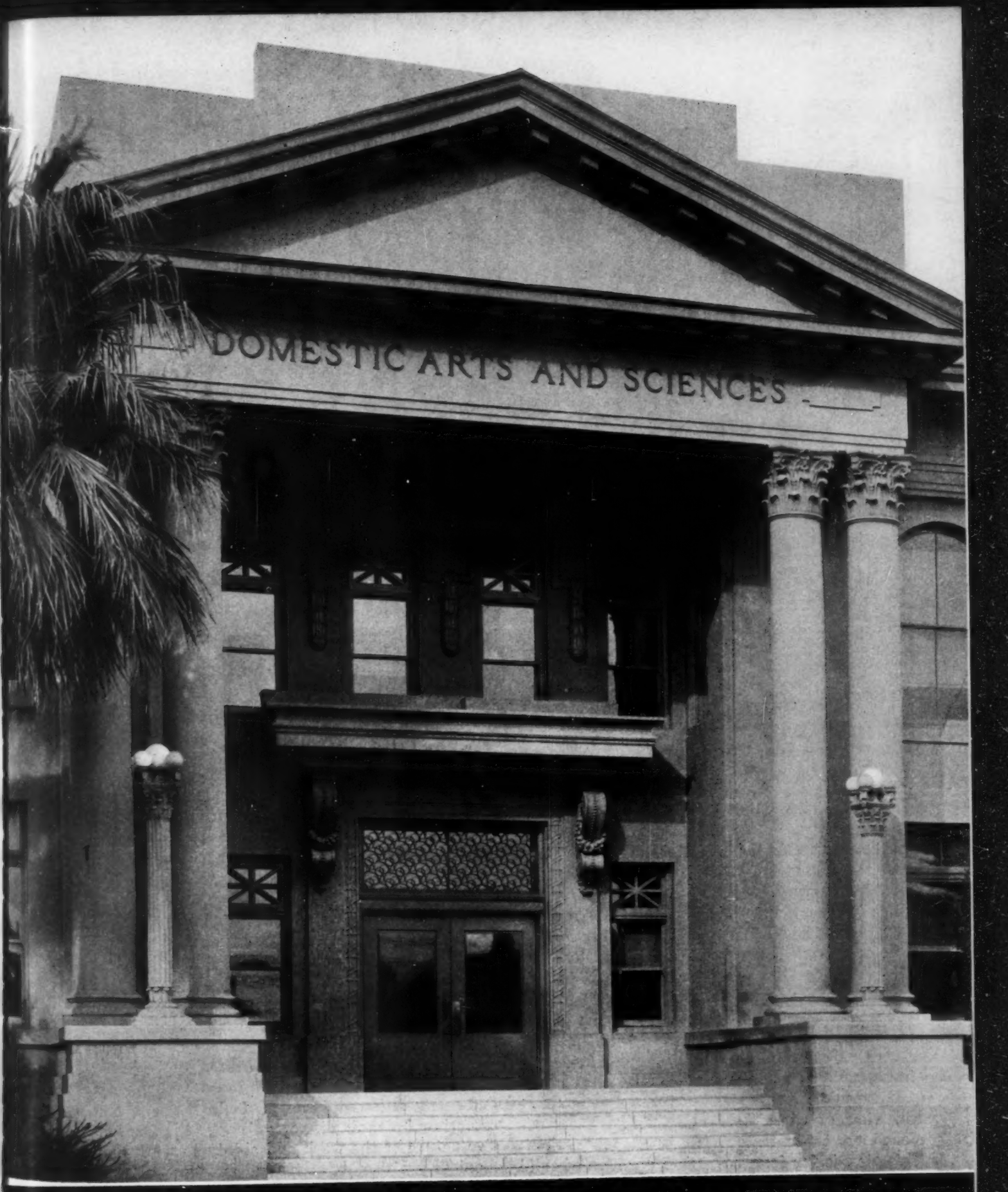
TO WIPE out graft, bribery and the injustice done by many employers, corporations, bankers and stock-jobbers is surely a task which adherence to the Constitution requires of educators. We can't keep its pledge of justice, domestic tranquillity, common defense, liberty and general welfare without fighting the nation's internal enemies. At the same time to promote a more perfect union of citizens to increase integrity along with human happiness is to aim at a notably better triumph.

SOME chambers of commerce and affiliates of money-grabbers are — you can't close your eyes to the fact — defending those who are wrecking the country. They are attacking the schools' offerings of literature, biography, music, art and other fads and frills that minister to general welfare and happiness.

THESE misguided men are a minority but they have system and skill. You must organize your majority to make the good prevail. You must foster the instinct of human brotherhood for honesty, justice and the pursuit of happiness. Some of these things school knows how to teach to children and adults. We shall learn how to train in all the civic attitudes promised by the wonderful men who framed the Constitution.

THIS is a Christmas sermon on peace on earth, good will to men.

Wm McAndrew



THE SCHOOL PLANT

Large acreage and artistic landscaping will characterize future plants.

Widening the the School

By ARTHUR B. MOEHLMAN

CHANGES in social living as a result of the rapid transition from the age of machinery to the age of power will within this generation be more startling and more significant than those that have taken place in the first third of the twentieth century.

Public educational activity within a community is complicated just to the extent that life has become complicated. So long as we desire to maintain the democratic way of life, on which all growth and development since the birth of the nation have taken place, it is fundamentally necessary to provide for public education in accord with the needs of each generation. So long as social change continues, public education needs will also change.

The teaching profession has taken a rather narrow view of educational activity and has envisioned it as concentrated in the public school plant. This view is far from correct. Education of child and adult goes on constantly and many agencies contribute to it. The home, the church, community life in general and commercial recreation agencies all contribute directly to the individual's education. A classification of all institutionalized public educational agencies would today include, in addition to the public school, libraries, museums, art institutes, zoos, public auditoriums and concert halls. These are all definitely represented in larger communities and they assist in providing the possibilities for a fuller and richer individual and social life. In small centers they are quite generally neglected and thus restrict the opportunities for the necessary enrichment of public education, so essential to present conditions.

As leisure has increased and urban territories have become more closely built, the need for recreation and for breathing space has become more urgent. Increasing emphasis has been placed in recent years on the need for recreational facilities including both parks and playgrounds.

It is necessary, therefore, in making rational plans for present and future education, to orient adequately the problems confronting us and to plan sensibly and consistently for their solution. Planning presupposes ability to see all the problems and willingness to engage in the effort essential to their solution. Since most of these problems are complicated and involve many groups of interests and many different technical factors, the second essential of planning is recognition of the cooperative nature of the work and ability to work harmoniously with other active and sometimes aggressive interests. The third problem in planning is that of convincing the public of the need for the plan and maintaining a rational public opinion with respect to it.

Comprehensive planning may begin with the

Uses of Plant

The Cleveland Stadium is a community gathering place for sporting events.

appointment of a planning commission including all the interests in the community, empowered to employ technical specialists to determine scientifically the totality of community needs. It is next possible to organize these needs around the several types of social organizations already in existence. A total inventory of educational needs in a community may be administered in various ways. In large urban centers it may be desirable to provide separate administrative control for schools, public libraries, art institutes, museums, zoos and recreation facilities, provided there exists some means of correlation so that all these activities will really serve the people. In smaller communities, however, it is possible and desirable to bring all educational agencies under a single control so that needs may be served with minimum duplication.

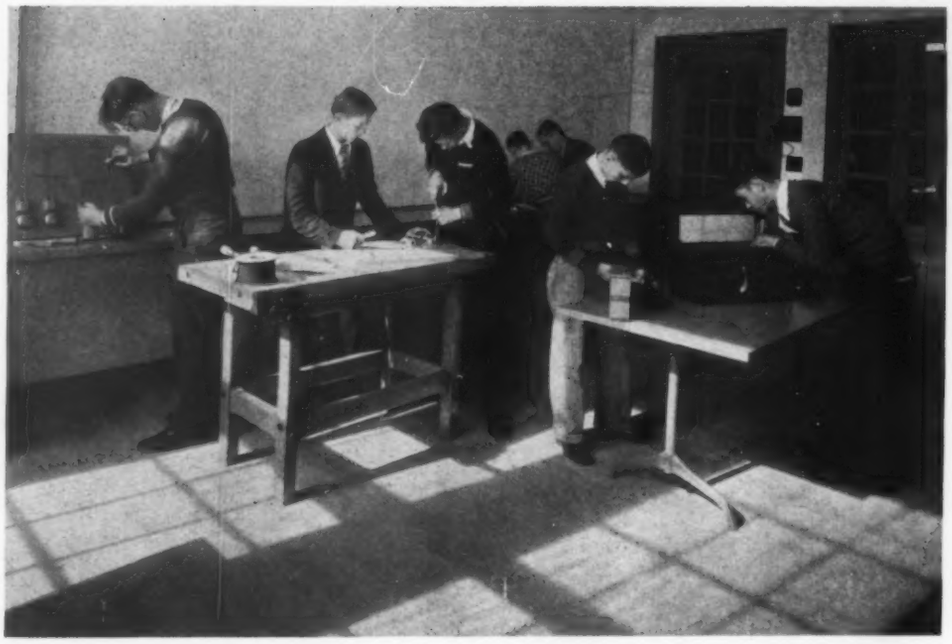
Educational requirements of the several states are changing so rapidly that the traditional type of school plant is no longer representative or adequate for the present, to say nothing of the future. In the age of power we are face to face with the problem of providing for children education that is much more complicated and involved than education in the present generation. This fact is due to the development of the science in education and to the complications of the world in which we are now living. The next few years will see many changes and developments in the curriculum, in methodology and in administration. We are face to face with the problem of what to do with adults. It will be exceedingly difficult in the near future for children under twenty years of age to secure employment, and active adults, twenty to twenty-five years old, will have much more leisure. The twenty-five-hour week is even now on the horizon.

Provision must be made for exercise of this leisure and for the continued education of adults, both for vocational and recreational ends. We can now drop the fallacy of the money value of an education and begin to speak about social and spiritual values. It will be necessary to provide means whereby local neighborhood groups can meet regularly in their schools for study of governmental and local problems, for play and recreation, for means of expression in the shops and in all of the fine arts laboratories.

What may be expected, then, from the school plant of the near future?

In the first place, future plants must have larger sites. Twenty acres will be the minimum for elementary schools and forty acres for secondary buildings. This increase in the size of site is necessary because the neighborhood school will be obliged to provide recreation space for both children and adults. For this purpose in a territory at least one mile square twenty acres represents a very minimum. The new site must also have sufficient space for adequate landscaping. Proper use of planting for screening purposes will eliminate many annoyances. A school site that looks like a park will increase surrounding property values.

The school site will also have a garden and conservatory where flowers and plantings may be propagated as an incentive to home gardening. A botanist or school gardener will assume leader-



Hobby shops provide instruction for the constructive use of leisure time.

ship of the home gardening project for the sheer pleasure of watching things grow and of reveling in the gorgeousness of nature's rich colorings. On summer evenings children and adults may bring their instruments to participate in good music in that part of the site set apart as a grove. An outdoor theater will also provide a setting for neighborhood pageants and theatrical presentations. Each school site will offer abundant opportunity for individual and group expression and for the constructive use of leisure time in favorable weather.

More fundamental changes will take place in the building itself. A building is merely a concrete expression of teaching needs and teaching practices. Minute divisions of subject matter will probably disappear in the near future, to be succeeded by six major divisions, each providing for continuity from the preprimary years through the junior college or higher secondary institution. These divisions will probably include health, languages, social studies, exact science, fine arts, exploratory and directly vocational activity. Provision must be made in each building for training on the adult level as well as on the child level. Many of these curricular changes may even now be found in progressive centers.

To provide for health education there will be gymnasiums, swimming pools, sun rooms admitting ultraviolet rays, rest rooms, cafeterias, dental and medical clinics. Specialized units will have apparatus designed to assist those unfortunates who have been crippled by disease or accident. Every means of enabling a child to develop a healthy physical body will logically become a part of the school plant.

On the instructional side many changes will take place. There will be more specialized classrooms and more small centers where children may work individually and in small groups. Atypical children—those with defective hearing, those who are partially blind, and those of low mentality, provided they are stable emotionally—will not be segregated but will be given training with specialized physical facilities within the community school. Since these youngsters must learn to live with persons who are free from physical and mental defects, they must learn in school to adjust to each other, instead of growing up as

Pleasantly arranged reception rooms are needed where parents and teachers may meet at their ease to consider their problems cooperatively.

social misfits because of segregation. There are many social activities in which the entire group of children may participate, and special classrooms and special apparatus and equipment may be supplied to meet peculiar individual needs.

Since much of the success of the new school will depend upon the teaching staff's knowledge of the individual child in his many and diverse aspects, there will be clinics for dental, medical and neurological investigation and care, and for psychologic, sociologic and instructional investigations. Children will not compete against one another in terms of the old mass instruction, but achievement will be measured on the rate of growth possible in terms of each child's inborn capacities and potentialities. Children who do not learn easily or who show great variations in learning ability will not be dismissed as in the past because they annoy the teacher; they will be studied by medical, psychologic, endocrinologic, educational and sociologic specialists.

For the social sciences in the typical community, provisions must be made for small but effective anthropologic or cultural museums where material showing the economic, social and ethical evolution of man may be displayed and used as visual accessories. In the exact sciences there will also be provision for many visual exhibits, including the fields of physics, chemistry and biology. There will be small but carefully chosen zoos where children may study the life cycles of various animals.

In fine arts, the curricular division whose object will be to provide means of individual appreciation, esthetics and self-expression, there will be a great extension of facilities. Drawing, ceramics, metal work and modeling will form a necessary part of the adult's work as well as that of the child. There will be an art gallery in which copies of treasures of the ages may be shown. Whether these exhibits will be carried in the corridors and regular school rooms or provided with special rooms will of course depend largely on local policy.

The modern school must have library facilities for adults as well as for children.

Auditoriums or little theaters will be essential for adult as well as for child activity. These rooms will also be used for community meetings and for social and political forums, for the school of the future must provide means whereby the political education of the entire community can be carried on continuously. No longer will it be considered desirable to exclude political discussion from the schools because of "bad influences upon the children." Instead, each school building will become a laboratory in practical politics and will serve as the primary unit in both national and local political activity.

While emphasis will probably be shifted from

directly vocational to prevocational and exploratory courses in the shops, there will be an increase in these mechanical laboratories. Here children and adults will be enabled to express themselves in wood and metal and to carry on their hobbies.

An adequate library will be provided in every school, under the direction of a teacher who is concerned with the direction of reading tastes.

Finally, every school building of the future should be designed by educational specialists around the curricular and extracurricular needs of the child and adult community. Its location must be determined by actual survey of community need. It should be built to serve for at least fifty years. It is well to remember that the cheapest building in erection cost may be the most expensive in upkeep cost. It is no more extravagant to build high quality schools than it is high quality homes.

The Selection and Care of Floors

By JOHN C. DINSMORE

Type of Floor	*First Cost*	*Life*	*Silence*	*Method of Cleaning*	*Method of Polishing*	*Wax to Use*
Wood	Medium	Short	Fair	Warm water and mild soap if unfinished. Rub with oiled mop if varnished, shellacked, painted or oiled If waxed, clean with soft brush or mop free from oil	None if unfinished; oil mop if not waxed; soft brush, if waxed	None if unfinished; spirit wax in thin coat if finished
Cement	Low	Long	Poor	Wet with clear water, then clean with hot water solution of scouring powder, washing soda (2-2½ oz. per gal.) sodium metasilicate, or trisodium phosphate (½ oz. per gal.) Rinse with clear water. Painted floors washed with plain water only	None	Spirit or water wax if floor has been treated to prevent immediate absorbtion
Vitreous Tile or Ceramic Terrazzo or Travertine	High	Long	Poor	Periodically with vacuum cleaner. To wash, wet with clear water, then mop with hot water containing alkaline cleaner. Rinse with plain water		Liquid wax in thin coat, polish hard
Marble	Very High	Long	Poor	Clean with vacuum cleaner. To wash, wet with clear water, then mop with hot water containing small quantity of alkaline cleaner. Rinse with plain water. Never clean with agent harder than marble		Polish hard with liquid wax
Linoleum	Medium	Long	Good	Untreated linoleum should be swept daily with soft brush or oil treated mop. To wash, use lukewarm solution (soft water) of mild or neutral soap	Dry dust mop or polishing machine, with fine bristle brush	Liquid or water wax emulsions
Rubber	High	Medium	Good	Mop with clear cold water with 2-4 oz. of household ammonia per gal. Wipe floor clean of solution with clear cold water. Do not use anything containing oil	Buffer	Two coats of bright drying water wax; more coats if necessary
Cork Tile and Carpet	High	Short	Good	Dry sweeping with hair brush. If necessary mop with lukewarm soapy solution of mild or neutral soap and clean soft water. Rinse with clear water. If waxed, rub with dry mop or polishing brush then sweep with brush or vaccum cleaner	Polishing machine, weighted brush or clean soft cloth	2 thin coats of liquid wax then polish
Asphalt Tile and Mastic	Medium	Medium	Poor	Mop with neutral soap and lukewarm soft water	Buffer	Water wax emulsion spread thin
Plastic Magnesia Cement	Medium	Medium	Poor	Wet with clear water. Then wash with warm water solution of neutral soap	Buffer or polishing machine	Water wax emulsions
Slate	High	Long	Poor	Mop with neutral soap and warm soft water	Buffer or polishing machine	Water wax emulsions

Choosing the School Architect

By W. W. THEISEN
Assistant Superintendent of Schools, Milwaukee

ANYONE who endeavors to unravel the difficulties that boards of education and superintendents face in connection with architectural service encounters a strange mixture of forces and motives. In some cases citizens, boards, superintendents and architects appear to have but one objective — to provide the best possible for the children with the money available. There are others, however, in which citizens and board members appear to be doing their utmost to keep the children from being properly housed. Fortunately public sentiment in some communities is such that merit alone is permitted to enter into the choice of the school architect, but in others it is so low that pressure and politics apparently determine almost every important step in the construction.

A study of some seventy cities indicates that in most communities the board of education has full authority to carry out all necessary steps in providing a suitable physical plant, but there are others, Massachusetts cities for example, in which it has little or no authority. Until public sentiment demands that the authority to erect schools be taken out of the hands of political bodies and placed in the hands of independent boards of education and their executive officers, we shall probably not reach a satisfactory situation. So long as communities are not awake to the need of electing men and women to boards of education who will not yield to the pressure of selfish interests and whose sole consideration is the welfare of the children the situation will not be effectively remedied.

Only positive and determined leadership on the part of school administrators will solve the problems connected with schoolhouse construction, Mr. Theisen points out. Public sentiment must be so awakened that selfish and political interests can no longer determine the selection of architects or the choice of building materials

Must Enlist Public Sentiment

Little is to be expected so long as mayors are permitted to choose school architects, as they do in some instances. The difficulties will probably not be solved until school executives themselves are fully awake to the need of enlisting public sentiment in the cause of properly planned and equipped school buildings.

Many honest and sincere board members fail to see the complete picture of all that is involved in the planning and construction of a school building. They are unfamiliar with successful methods used in choosing architects, the conditions that should be included in their contracts, or the ways by which expert educational advice may be utilized in the planning of school buildings. In some cases superintendents themselves in the past appear to have been lacking in familiarity with important elements and standards of modern schoolhouse construction. These are primarily matters of education for which the superintendents and boards of education must accept the major responsibility.

Some boards are still enamored with the idea that any good general architect can build a school building. They fail to realize that schoolhouse designing and construction call for a special type of architectural ability of a high quality and that so long as men are engaged who are not competent to design educational structures, we may get buildings that are architectural monuments but more than likely they will be educational monstrosities. Often the disposition to select a general architect rather than a school architect is fostered by a desire on the part of certain members of the board to reward local architects, regardless of their professional standing or any particular fitness for planning school buildings. Perhaps the most pernicious influence that enters into the selection of architects today is the matter of "pressure." It may or may not be political in nature.

Even for the board that has the necessary courage to withstand strong pressure, the problem of choosing an architect presents complications. One essential is to determine whether the architect actually possesses the ability and attitude of mind nec-

essary to the construction of a satisfactory school building. To determine this is extremely difficult. Boards whose intentions are of the best frequently fail to make adequate analyses of the kind and quality of service that the architect under consideration is capable of rendering. They do not always inquire whether he is particularly skilled in educational planning as well as in general designing; whether he is relatively free from bias or prejudice in favor of certain types of design or construction, and whether he is open-minded and willing to study school problems.

Supervision and Inspection Essential

Not infrequently boards of education neglect to find out whether the architect's past record indicates that he is likely to cooperate with the superintendent, whether his plans when completed will actually call for the embodiment of school needs in material form, or whether he will plan a building that is structurally sound and meets all requirements for safety, sanitation, heating, lighting and ventilation. They do not always ascertain whether he has a due regard for beauty in internal treatment as well as in exterior design; whether he knows where and where not to economize; whether he writes specifications that are so carefully detailed and so free from ambiguities that there will be no loopholes through which wily contractors may escape, and whether or not his specifications are of a type that unduly favor certain bidders or manufacturers.

It is the unusual board that takes the pains to learn whether or not the architect under consideration is entirely free from obligations to contractors or manufacturers, whether he is skillful at drawing contracts and competent to protect the board's interests at all times, and whether his integrity is above question. A board of education that does not satisfy itself that the architect is equipped to provide proper supervision and that he will provide competent and fearless inspection at all times, in order that there may be no use of inferior materials or careless workmanship, is courting trouble. Each of these questions and others must be raised and satisfactorily answered before the board may be reasonably sure that the architect will prove worthy of its expectations.

The regrettable fact is that sincere efforts to secure the best man, by means of careful investigation of the actual abilities of those available, must frequently give way to more political methods. Instead of investigating the qualifications of men of outstanding reputation in the field of school architecture or accepting advice from the superintendent, the selection is too often made on the basis of political advantage, personal friendship or pressure from special interests. The effects of these political procedures indicate that the building in such cases is more likely to determine the curriculum than the reverse.

Apparently many architects have yet to learn that the building should be planned in terms of the curriculum and the administrative organization to be employed in operating the school. They may be quite successful in planning general structures in such a way as to be sound in every particular and attractive in external appearance, but still be decided failures in educational designing.

Every modern school building involves hundreds of details of planning and construction that affect its efficient use as an educational institution. Administrators need to insist that schools be planned to facilitate good teaching rather than to prevent it, as so often results. Numbers and sizes of rooms of various kinds should be properly balanced and located with a due regard for the efficient administration of the school. Their design and treatment should be conducive to efficient teaching and to the mental and physical comfort of pupils and teachers. Equipment needs to be designed with a view to maximum educational service. Economies need to be observed in the use of floor space.

Another frequent criticism arises in connection with supervision of construction. Architects fail in supervision more frequently than in any other respect. In many cases, the board is negligent in not ascertaining the architect's qualifications for supervising construction and in not specifying in rigid detail the kind and amount of supervisory or inspectional service to be provided.

Beautiful Design Is Not Enough

Boards of education quite often appear to be enamored of attractive drawings of proposed elevations and to underestimate the importance of other matters. They not only fail to consider that the complete plans and specifications must include many hundreds of details, but they forget that only if the architect combines the qualities of an administrator with those of a designer will a satisfactory building result. Contract terms and specifications not only must be written but must be enforced. Many potentially excellent buildings are ruined for sheer lack of spine on the part of architects. The successful architect possesses the ability to hold the contractor to every detail of his contract.

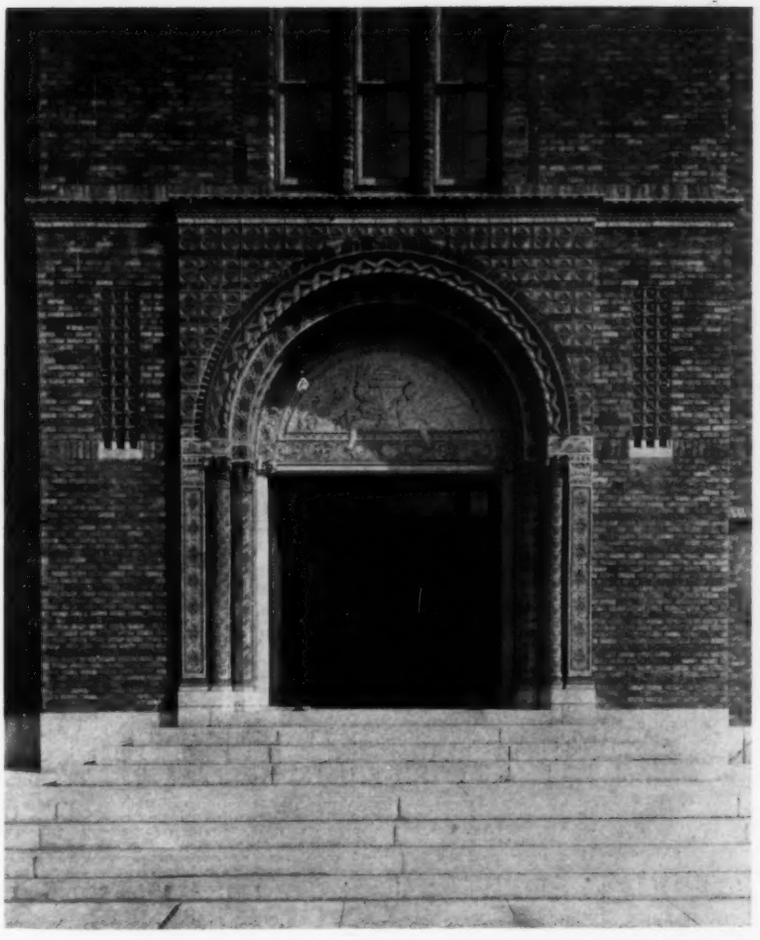
The difficulties with respect to architectural service are not impossible of solution, but only positive and determined leadership on the part of school administrators will solve them. In some states, legislative measures vesting control in the board of education will be necessary.

Terra Cotta as Applied to Modern School Buildings

By

CECIL FIDLER

Ceramic Engineer, New York City



THE problems generally encountered when a new school is to be erected or an old one is to be modernized are receiving considerable attention at the present time from educators and from school boards. There are, however, certain requirements for school building construction that might be considered as standard for all time. Chief among these standard requirements are good, permanent construction and fire resistance.

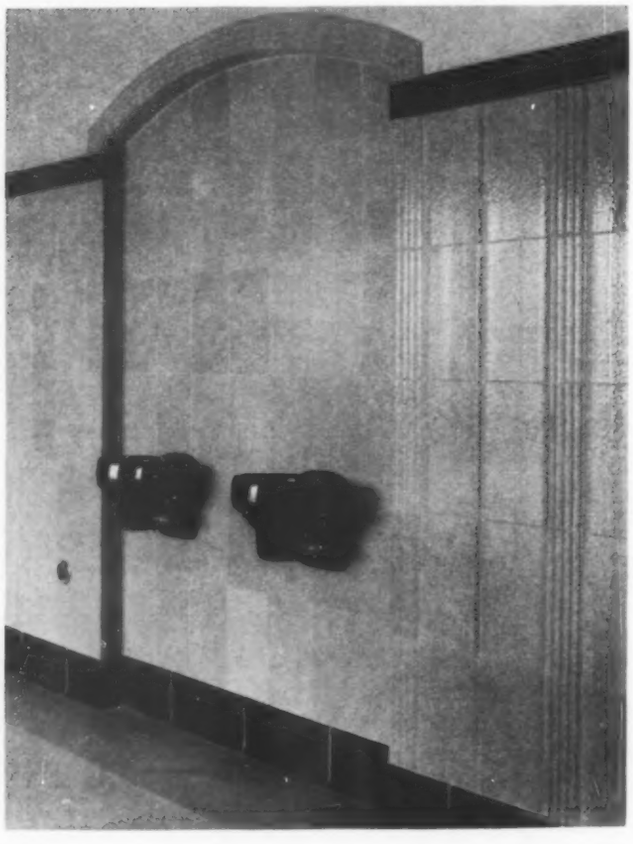
It will be remembered that the schools in the Long Beach, Calif., earthquake in 1933 were so poorly constructed that they received more damage than any other type of building, and it was indeed fortunate that there was not considerable loss of life. The slight savings that such inferior construction might have made have been more than offset by the reconstruction and repairs that were so necessary. Of course, it is understood that earthquakes are not common to all parts of the United States but all communities are subject to the hazards of fire. A school building should be as fireproof as present day construction methods will allow and the negligible additional cost of making it so will prove more than a profitable investment.

A school building, too, should be beautiful in design, preferably a modern adaptation of an appropriate architectural style. For instance, in New Rochelle, N. Y., which was founded by French Huguenots, the new high school is a modified French Gothic. In the Southwest a number of new schools are designed in the traditional Spanish Mission style. The recently completed junior high school at Vallejo, Calif., is an example of this type.

Attractiveness in a school building serves two purposes. It gives to the children or students attending an appreciation of good architecture and a feeling of pride in their school and, especially important, it eliminates the dread of school that many old, poorly designed and depressive schools often cause.

Too, modern school buildings are becoming increasingly employed for general civic use. Special night courses for adults in the classrooms, theatrical performances and concerts in the auditorium,

Above, a light buff terra cotta trim decorates this elementary school in Oyster Bay, N. Y. Below, corridors in Weequahic High School, Newark, N. J., are a mottled tan and cream. The base and cap molding is black.



and dances and athletic events in the gymnasium all tend to make the average citizen more keenly conscious of his community school than was formerly the case. Consequently, quality of construction and beauty of design are factors that the manifold purposes of a modern school building more than warrant.

Designing a school building to be attractive and cheerful is neither difficult nor expensive. If the building is to be faced with brick as is quite often the case, it may be trimmed advantageously with burned clay in another form—terra cotta. This versatile building material, which is one of the most ancient known to man, is also considered as one of the most modern. It possesses all the qualifications necessary in up-to-date building construction—large units, light weight, great insulation value against heat, cold and sound, structural strength, fire resistance and imperviousness against moisture and weather. It is an economical material also, as plain wall areas are made by machine and modeled ornament can easily be repeated indefinitely at but a fraction of the cost of original modeling. All duplicates are always exact reproductions of the original and bear all the artistry and plasticity of the sculptor's creation. The cost of erection also is comparatively low because of the light weight of this material.

Color as applied to a school building has been receiving more and more attention during the last three years, not only because color is considered an integral part of modern architecture but because of the freshness and cheerfulness that it

brings to such buildings. It so happens that architectural terra cotta is one of the few building materials that has available an almost unlimited palette of permanent colors. It may be obtained in soft pastel shades and textures or in brilliant polychrome and faïence effects.

Colored terra cotta may be adapted to a school building in many ways. It may be used merely for the entrance features or it may be applied to all exterior trim. Polychrome cornices, columns and pilaster capitals and decorative inserts are now quite common and they are traditionally correct as all Greek and Roman architecture was so colored.

Some school buildings are completely faced with terra cotta but in this case abbochrome colors are generally used with perhaps polychrome for the accentuation of the design. Abbochromes are mottled combinations of three or more colors applied simultaneously with one tone predominating. Their surface is minutely irregular so that it diffuses light evenly without glare and makes a splendid background for floodlighting effects.

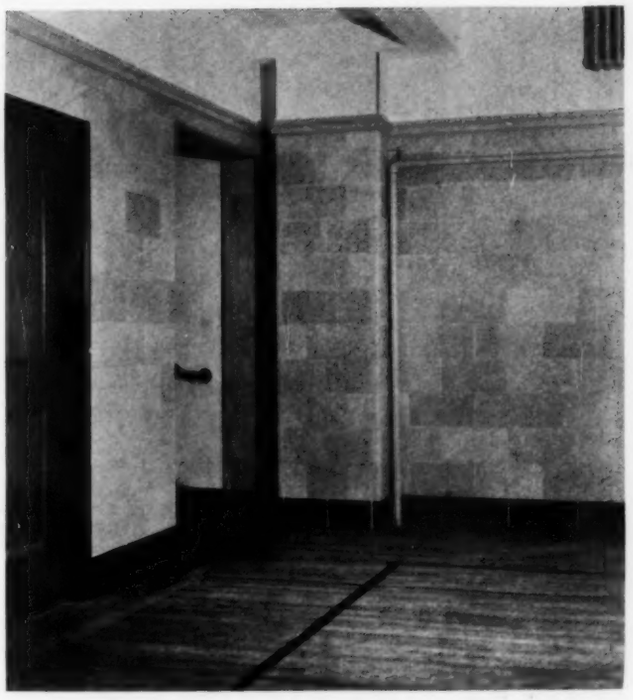
Abbochrome colors, which are made either in matt or lustrous glazes, are equally appropriate for school interiors. In fact, they are extensively used in this manner. Usually applied to machine made blocks known as wall units, they are used for both the construction and facing of interior walls and partitions. These terra cotta wall units are made in several sizes ranging from 8 by 16 inches to 12 by 24 inches and in thickness from 1 to 8 inches so that they can be used either as a veneer or as a complete supporting wall. Their comparatively large size and the fact that their edges are true allow them to be set easily and economically and with even and artistic jointing schemes.

Is Not Affected by Heat

Terra cotta wall units possess all the advantages of regular architectural terra cotta, including extreme fire resistance. Terra cotta is manufactured at a kiln temperature of 2300° F. and so no heat not greatly exceeding that temperature can have any appreciable effect upon it.

In addition, and as previously mentioned, these wall units are made in glazed surfaces which do not easily retain soilage and which, if necessary, can be washed with ordinary soap and water. This is an important quality as walls or wainscots of school corridors, classrooms, auditoriums or lavatories and other such places are continuously being marked with ink and pencils and grimy hands. Usually, interior school walls require repainting during vacation periods. With a terra cotta wall such expensive maintenance is unnecessary.

Despite their glazed surfaces these walls do not cause reverberation of sound when used in classrooms and auditoriums as their partly vitrified clay body and hollow construction naturally prevent this. However, some manufacturers offer a sound absorbing terra cotta for upper walls and ceilings where such an acoustical material may be considered necessary.



Terra cotta wainscoting in the gymnasium of All Hallows Institute, New York City. The beauty of tone and the evenness of the jointing scheme show in the photograph.

Gymnasiums and swimming pool rooms are particularly appropriate places for terra cotta wall units. They have been used in many fine installations of this type because of their cheerfulness of color as well as their sanitary value.

A moisture resisting type of terra cotta clay has recently been developed especially for swimming pool construction. This is an extra advantage as ordinary glazed terra cotta has long been appropriately used for swimming pools. It can be made in any glazed color besides the customary white, with distance and lane markers in dark green, blue or other contrasting color. For scum gutters or ladders terra cotta is often used, regardless of what other materials may be employed for the pool.

There are progressive manufacturers of architectural terra cotta in all sections of the United States as clay, the basic material, is distributed widely. This is an important factor to be considered in the specification of any building material as shipping costs for a structural material are comparatively expensive. This fact also allows every new school, no matter where located, to be designed attractively and to possess the dominant requirements of school building construction.

School Walls Note of

An art project in New Orleans has resulted in the interesting panels pictured here. Advanced art students in a school conducted by the Arts and Crafts Club of that city did the panels, and they now appear on the walls of one of the public schools, to the great interest and delight of the pupils. All depict Louisiana pastoral scenes—steamboats, cotton picking and Negroes among the sugar cane. The medium is water color, permanently fixed with gelatin and shellac.

THE drab monotony of white plastered walls to which a coat or two of buff paint have been applied is destined to be relegated to past chapters in American school history. These bleak surfaces are now emerging in colorful scenes, in some instances the work of talented art pupils, in others the result of activities sponsored by such governmental agencies as the PWA.

An interesting development of this kind is to be found in the colonial entrance hall to the John McDonough Public School, No. 15, New Orleans. Here nine unusual panels adorn the walls, all of them pastoral in quality and depicting the wild life and flora, the fish, fruit and industries of Louisiana.

The panels represent the work of advanced art students in the New Orleans Art School, which is conducted by the Arts and Crafts Club of the city. The city school board cooperated with the club, and the materials for the project were donated. Each student among those selected as competent to participate was required to submit an idea in the form of a sketch. The faculty served as judges, following which the sketches approved were worked over to assure greater perfection.

The panels are painted in water color and fixed permanently with gelatin and shellac. Pale silver greens and gray lavenders predominate with earth tones and fading twilight yellows effectively introduced. A narrow border surrounds each panel and a small plate at the bottom explains the scene.

Each picture reflects the atmosphere of the state —an old Negro picking snowy bunches of cotton from the plant and dropping them into a huge basket — a Negro woman carrying on her head a large tray piled with vegetables and accompanied on one side by a small boy bearing a pole from which hang four or five fish, on the other by a little girl also bearing on her head a tray of luscious fruit — two Negroes standing between majestic trees against a background which shows a Mississippi River steamboat — a Negro cutting sugar cane.

The New Orleans plan suggests the idea that groups of students under competent direction might be employed to create works of art for the benefit of the community as a whole. Precedent for such a scheme was set by the pupils of the great Italian artists who created for their masters in their studios during the Renaissance period those beautiful walls that attract lovers of art from all over the world.

Now Assume a Beauty

As Charles Bein, director of the New Orleans Art School, explains it: "One is reminded that we might with little of our past expenditure and a great deal of awakened intelligence give the youth of our country a chance at expressing an enthusiasm and inspiration characteristic only of youth. At the same time such projects would afford concrete work for art schools to use in teaching the need for fitness and perfection in art in public life, as well as the necessity of designing for permanence."

Better School Practices

Cleveland Schools Stress Garden Projects

Gardening is the everyday approach to nature for most people, and a logical way of teaching many phases of nature study in the schools.

If the schools are to accept the challenge of preparing children for the many hours of leisure which the future seems to hold for our people, they cannot afford to leave out gardening as one of the primary avocational subjects. The startling growth of public interest in gardening magazines and books, garden clubs, and gardens themselves shows that the public has begun to appreciate the place of the garden as a leisure time occupation. Can the schools afford to omit a subject that so completely satisfies every requirement, social as well as individual, for worth while use of time not needed for gainful work?

Cleveland's board of education includes gardening as an integral part of school science and is conducting a program that is accepted with approval by teachers, parents and children. About 46,000 children in Grades III to VI inclusive receive regular school-time instruction in gardening; nearly 11,000 children conduct home or school garden projects.

The time is not far distant when gardening must take its place with music, art and physical education as an essential part of the school's program to prepare children for all-round living in the "new day."—PAUL R. YOUNG, *Supervisor of School Gardening, Cleveland Public Schools.*

Texas Launches Plan for Music Study

We are launching in Texas a curriculum-building program. Music will be one of the fundamentals of this program. We recognize the need for training the emotions as well as the intellects of children. The new emphasis given leisure time has made it necessary that attention be given to this type of development. The right kind of music will help to mold the right kind of thinking, and the right kind of thinking will develop the right kind of citizenship.

Every child in Texas, no matter where he is located, should know at the end of this scholastic year at least ten songs. At the end of his training in the public schools of Texas, we expect every child to be able to sing from memory at least ninety songs, one-third having been learned in the primary chorus, one-third having been learned in the junior chorus, and the other one-third in the senior chorus.

When school opened in September, our entire staff of supervision within the state was prepared for the year's work in music through conferences held during the summer. The equipment was purchased and installed through the state's fund for equalization of educational opportunities, and each of the 45,000 classroom teachers in Texas has been given complete instruction on how to proceed in developing an enlarged program of music.

In 1936, Texas observes her Centennial. By this time we expect to have taught all of our Texas songs to the 1,600,000 children. If you visit our Centennial, we shall greet you with one and one-half million voices trained under this new program, singing themselves into worth while citizens.

There is no substitute for music in the program of an enlightened and cultured nation. It is a fundamental part in all programs, in the clubs, in the civic organizations, in society in general and in the churches. Why not make it fundamental in our educational program?—L. A. WOODS, *State Superintendent of Public Instruction, Austin, Texas.*

Inclusive Curriculum by Alternation

One of the great limitations of the small high school is the lack of breadth of the course of study. In the United States there are thousands of high schools (the term high school being used here to include Grades IX to XII) which, by reason of small enrollment and pressure of time, do not offer to their pupils the elective subjects that enrich vastly the basic offerings which are required by law or by tradition.

At the Keystone High School, one of the 616 high schools in Iowa whose enrollment is under 100 (70.6 per cent of the total schools), I worked out for use an experimental two-year program. By dint of much study, a schedule was constructed that offers to each of the eighty pupils who remain four years to complete the high school course the opportunity to secure his thirty-two credits from a total offering of fifty-four.

Our faculty is composed of five members, of whom one is the superintendent, who divides his time between supervision and teaching. The day is divided into eight, forty-five-minute periods, the eighth of which is devoted to extracurricular activities.

Since study halls are occupied by relatively few pupils during any one period, the teachers in charge are enabled to perform work for which vacant periods might otherwise be required. By omitting the eighth grade entirely from the schedule, some periods would be freed for such a purpose.

One of the factors that must be considered is the necessity of providing college entrance credits while at the same time broadening the course so as to benefit the many pupils who will not continue their schooling beyond the twelfth grade.

Another question that arises when a curriculum is enriched is to determine how far a pupil will be allowed to elect subjects, and how many years of mathematics, science and English must be studied to qualify for graduation. This is, of course, to be determined by local authorities when no state rule regarding requisites for graduation is in effect.

Some courses must be offered in conflict with others, because of lack of time. But certain lines, such as commercial work, can be so arranged that it is possible for a pupil to complete an entire business course without conflicts with subjects necessary for graduation.

Details of the technical schedule will gladly be furnished upon request.—CALVIN GRIEDER, *Superintendent of Public Schools, Keystone, Iowa.*

If you have practical suggestions that might help other school administrators The NATION'S SCHOOLS will be happy to have them for inclusion on this page

Safe Stairways or Hazardous?

By FRED W. FROSTIC
Superintendent of Schools, Wyandotte, Mich.

It is safe going either up or down this stairway.

STAIRWAY falls cause approximately 4,500 fatalities yearly in the United States. If one adds to this figure the number of stair accidents which, while not fatal, cause serious injury, the number will probably be five times as great. School children probably form the lesser portion of this group because of their ability to react quickly in regaining balance and because falls in general are not so serious for children as for adults. The fact remains, however, that many stairs in school buildings constitute a real hazard to the safety of both child and adult.

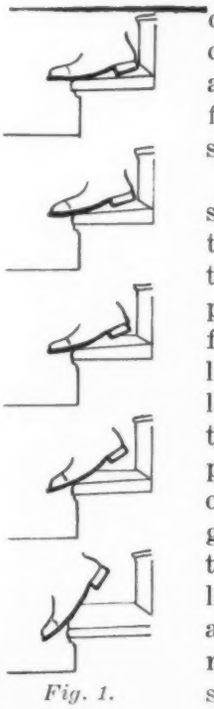


Fig. 1.

Stair accidents are due most often to the type of tread, the architectural design, or both. Some accidents, of course, may be classified as unpreventable so far as the stairs are concerned.

The type of tread is especially significant. Accidents may be traced to the material of the tread, the maintenance methods employed or the character of the front edge of the tread. Materials like steel, marble, smooth terrazzo, linoleum, hard wood and certain types of tile are especially slippery. Some of the harder forms of marble, for example, Tennessee gray or red marble, while beautiful and well suited for wear offer little friction to a leather sole and are not well suited for stairs under rapid traffic. Wood is much less slippery if kept free from varnish, oils or certain floor treatments. While finishes preserve the wood and greatly improve the appearance of the stairs they often increase the hazard factor.

Linoleum, while not especially slippery, becomes so when treated with almost any one of the many waxes on the market today. The same wax might not constitute a great hazard on a floor surface, but on stairs this factor is greatly increased because of the difference in the movement of the feet.

The hazard in the case of marble and terrazzo is greatly increased when wax is used or when wax is tracked from other treated floors to these surfaces. Maintenance methods in which oil soap is used on the tread surfaces and not completely removed after cleaning also contribute to danger.

The most serious hazard is the tread with the wrong type of edge. Figure 1 shows how the sole of the shoe moves over the edge of the step; at certain moments the weight of the entire body pivots over a small surface of the tread edge. This is the moment of least friction and slipping is likely to occur if the edge of the tread is too smooth. Marble becomes easily rounded and

smooth at this point and thus the danger is enhanced. Wood, particularly treated hard maple, presents the same difficulty. Steel is the most serious offender since it presents a surface that becomes highly polished and thus offers little friction. The polished steel edge of certain pan construction stairs irrespective of what material may be used on the rest of the tread cannot be condemned too severely. Figure 2 shows the faults of this type of construction.

It has been a common practice to use rubber on the tread and brass nosing on the edge of many stairs. Rubber is silent and certain types of it prevent slipping. But rubber wears out rapidly and is difficult to maintain and the brass edge sometimes gives rise to a greater hazard. The brass edge often fails to fit closely to the tread, especially after a period of wear; it breaks away and trips the individual by catching some part of the shoe.

The design of the stairs often contributes to the danger factor. Because of inadequate space allowance the riser, or height of the step, has to be increased to such a distance that the stairs become difficult to climb. After traveling a short distance upstairs the individual becomes leg-tired and catches his toe on the projecting edge of the run, or tread distance. In coming down such stairs the period of pivot of the sole on the edge is increased as well as the steepness of the angle, both of which increase the danger of serious accidents.

Figure 2 illustrates this danger also. In this case the riser is 7¾ inches high, the run is but 9 inches wide and the stairs become a grown-up stepladder. These stairs were constructed for a combination elementary and high school only a few years ago and several serious accidents have occurred on them. Bad planning on the part of the architect and ignorance of school traffic requirements, if not downright malicious practice, are illustrated in this case. Such stairs contribute to heart strain, which is not uncommon among adolescent pupils.

Accidents sometimes occur on the best designed and maintained stair traffic areas, and these cannot be attributed to the stairs themselves. A case

Fig. 2—How not to build a stairway. The risers are 7¾ inches high. The edge of the tread is of highly polished steel.

Entrance to the Frick Building, Pittsburgh, showing the insertion of carborundum non-slip lines in the tread, thus making the limits of the tread well defined.

in point is that of a pupil whose shoe lace on the right foot caught in the hook of the left shoe while he was walking down stairs quietly and alone. It threw him down several steps and both wrists were broken. His feet were still entangled when he was found. Sometimes sudden dizziness, fainting or jostling is the cause of accidents.

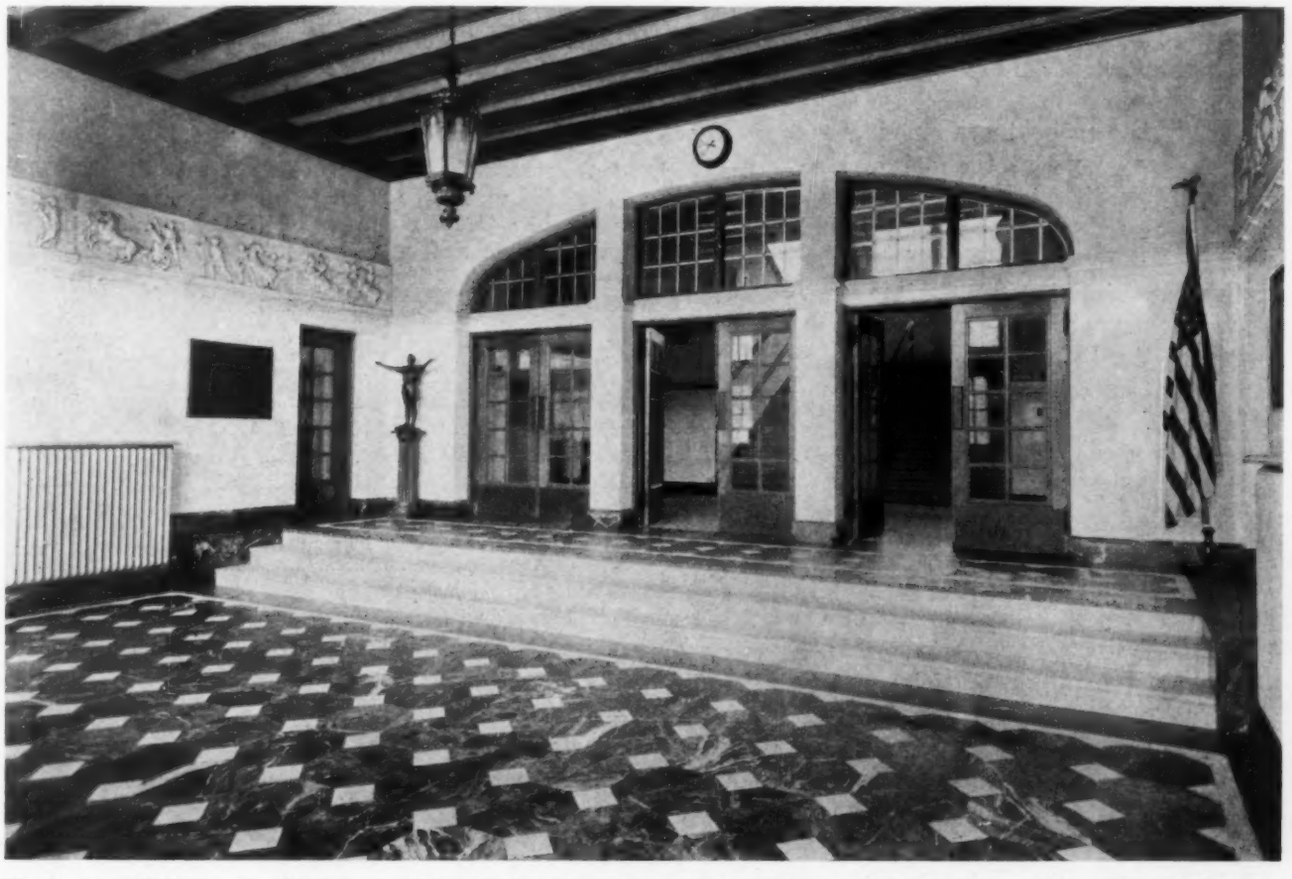
"The Care of Slate Blackboards" is the subject of the next article

Care should be taken in designing new buildings to see that adequate provision is made for safety in stair traffic areas. The ratio of the riser height to the run is of great importance. A height of 6 inches for the riser and of 11 or 12 inches for the run or tread gives one of the best ratios for general purposes. This ratio is suitable for both elementary and high school pupils. It contributes to safety and ease of movement up or down stairs. The edge of the tread should not project more than one-half inch beyond the riser.

The stair structure may be of reenforced concrete or of steel. The tread material may be constructed of one piece of natural stone which is sufficiently hard to resist wear and gritty enough to prevent slipping. It should also be easy to maintain. Among natural stones certain kinds of slate serve this purpose well. Artificial materials are, however, best suited since they may be made to combine all three elements — resistance to wear, nonslip properties and ease of maintenance.

Among the highest quality of these are certain ceramic tiles containing carborundum. It is not necessary that the entire run be made of this material so long as a reasonable depth of tread, 3½ to 4 inches, and the edge of the tread are so constructed. The remainder can be of terrazzo, marble or ornamental tile, since the foot-pivot over the edge and the sole of the shoe resting on the tread are amply protected by this width. Such treads are easy to keep clean, present an attractive appearance, resist wear almost completely, and make slipping practically impossible. Years of heavy traffic fail to reveal any appreciable wear. The colors range from gray through blue tones to tan and red-brown. In general the light gray tones are most expensive while the red-brown costs least. Care should be taken to select the grades with rather coarse grains of carborundum. Such treads practically cling to the sole of the shoe in either dry or wet conditions. Metal edges are almost always inferior to such treads.

The school executive usually finds himself con-



These are well designed school steps, although they lack adequate protection against slipping and the edges of the white marble are not well defined.

fronted with a stair problem with which he has had little to do regarding design or installation. The problem then becomes one of making such stairs reasonably safe at a cost that is not excessive. Wood, marble or composition treads often exhibit the effects of wear, which complicates the problem of repair. In general, repair materials should be inlaid into the tread unless the entire tread is covered by the material. Hollow worn spots may be filled with plastic compounds before the tread is applied.

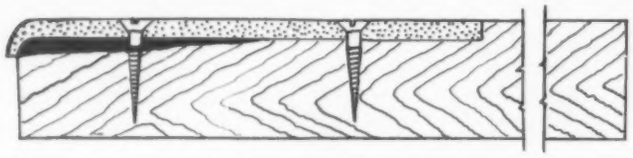


Fig. 3 — A nonslip tread may be inlaid into an old worn tread in this manner greatly increasing the safety factor.

Several materials are offered for this purpose such as metal alloys of bronze, zinc and iron. These are usually thick and when placed on the surface of treads make a place for dirt to collect between the new material and the riser as well as making an uneven tread. Furthermore such materials seldom provide protection from slipping on the immediate edge of the tread, the point of pivot.

One of the most successful materials for this purpose is a hard rubber compound plate which contains carborundum aggregate. Such treads are usually not more than one-fourth inch thick. They may cover the entire tread curving over the front edge. Worn spots in the original step may be filled with plastic material. If the step is of wood an electric router may be used and the material inlaid into the step so that all surfaces are flush, as illustrated in Figure 3.

Marble steps are one of the most difficult to treat artistically so that they may at the same time be made safe. On the preceding page is shown an entrance of Vermont marble and verd antique. The three steps are well designed and proportioned. The top step and floor of verd antique are dark and provide an excellent differentiation of the limits of the step edge. Between the second and third steps, descending, the white edge of the second step merges into the run of the third and it is difficult to tell just where to put your foot down under certain conditions of light. This is also true of many stairs made of one color of marble, such as Tennessee gray or red.

An artistic new process that adds greatly to the safety factor has recently been perfected for the treatment of this type of stairs; it is shown on page 54. The step is grooved out in three stripes one-fourth inch wide by a special grinding machine to a depth sufficient to give body to the compound and a mixture that contains carborundum is inserted. The mixture extends slightly above the surface of the marble and hardens into an extremely resistant surface; at the same time it clings to the surface of the shoe sole. Its greatest defect is that it does not reach the edge of the tread.

The black lines, if well spaced, add greatly to the artistic appearance of the stairs and make possible clear differentiation between treads.

The cost of safety tread materials is still a large factor in limiting their wider use. One of the best nonslip tiles for a new installation costs approximately 80 cents to the running foot for 4-inch wide material. The best material for replacement on old stairs costs about 50 cents per running foot for 3¾-inch material. These costs cover only material and the labor of installation must be added in determining the final figure. When safety is concerned, however, the cost cannot be considered as too high for even one serious accident.

In all safety installations the entire running edge of the step should be covered, and the entire width of the tread should be covered to a depth at least of 3¾ inches to provide the minimum amount of safety from hazard.

Proper Illumination for Schools

How much illumination is necessary in the various parts of school buildings and gymnasiums? Too much illumination is wasteful and too little illumination is a handicap on the occupants of the room. Helpful data on this subject have been worked out by Hygrade Sylvania Corporation, Salem, Mass. Both recommended light intensities and minimum light intensities are given in terms of foot candles, as follows:

FOR SCHOOLROOMS

Location	*Recommended Foot Candles*	*Minimum Foot Candles*
Auditorium	8	5
Classrooms, library and office	12	8
Corridors and stairways	5	3
Drawing rooms	25	15
Laboratories	12	8
Manual training	12	8
Sewing rooms	25	15
Study rooms—desks and blackboards	12	8

FOR GYMNASIUMS

Main exercising floor	12	8
Swimming pool	8	5
Shower rooms	6	4
Locker rooms	6	4
Fencing, boxing, wrestling	12	8

The following word of caution is offered in the pamphlet: "To secure maximum light at the lowest cost for electric current, make sure that the voltage of your lamps is the same as the voltage of the circuit on which they are burned."

Two sixth grade girls assist the dietitian in checking each child's tray. He is sent back if his selection does not conform to the rules.

Good Food Habits Start in Elementary Grades

By MAE D. PAIGE
Director, School Cafeterias, West Hartford, Conn.

THERE are three school cafeterias in West Hartford, Conn., all of which were built within the last five years. One of these is at the William Hall Senior High School, one at the Alfred Plant Junior High School and one at the William Sedgwick Junior High School. High school pupils number approximately one thousand — 600 in the Plant Junior High and 350 in the Sedgwick School along with 300 elementary pupils.

West Hartford, a suburb of Hartford, is a moderately wealthy town. The school cafeterias have always been well patronized. Each school has a trained dietitian who is responsible to the director of the cafeterias. All cafeteria activities, however, come under the supervision of the board of education, the superintendent of schools, Mr. Lloyd H. Bugbee, and the three school principals.

This year our menu includes the following:

1.	Soup	5c
2.	Balanced plate of meat and vegetables	15c
3.	Balanced plate of three vegetables	10c
4.	Choice of any vegetable	5c
5.	Hearty dish such as macaroni, baked beans, tuna wiggle, creamed eggs	7c
6.	Choice of 2 salads	5c
7.	Choice of 3 sandwiches	5c
8.	Health Special such as celery and raw carrots, tomato juice, orange juice	3c
9.	Pudding, cake, fruit, ice cream	5c
10.	Apples, bananas, oranges	3c
11.	Rolls, cookies	2c
12.	Milk, chocolate milk, cocoa	5c

The same menu is used in all our cafeterias and there has been inaugurated a special system for feeding the elementary children. Junior and senior high school pupils are allowed twenty-five minutes for lunch on a single session basis. The elementary

school children are on a double session with one and one-quarter hours for lunch. This enables them to go home. Many mothers, however, prefer to have their children stay at school for lunch rather than have them hurry home, eat a hasty lunch and hurry back. Owing to the fact that a large number of these small children are being fed, a special scheme has been devised.

In the beginning, the children were allowed to go through the cafeteria line in the usual manner. It was discovered that they used fairly good judgment in choosing lunches. Still we felt that they were too young to realize what they should eat. Hoping to find a better method of feeding these children, who are from 5 to 11 years of age, other cafeterias were visited.

No school in this vicinity was feeding elementary school children who went to school on a double session. Some schools closed around one o'clock, but these schools did not need to serve a full meal, as the pupils ate when they reached home. At nursery and private schools, it was observed that set meals were served each child in the dining room. It was not possible for us to do this as we are equipped only for cafeteria service. The advice of the superintendent of schools was then sought. He suggested that the mothers be asked how they felt on this matter. A letter was written to twenty representative mothers inviting them to a meeting for the discussion of this matter.

CAFETERIA MENUS IN WEST HARTFORD SCHOOLS

Dinner With Meat 25c Without Milk 20c Without Dessert 20c	*Luncheon 20c Without Milk 15c Without Dessert 15c*	*Suggested for Pupils Who Bring Their Sandwiches, 5c Each*
	Monday	
Roast veal Potato, cauliflower Milk or cocoa Ice cream	Roast potato Escalloped tomato, cauliflower Milk or cocoa Ice cream	Any vegetable Creole soup Cheese fondue Waldorf salad Lettuce salad
	Tuesday	
Swiss steak, mashed potato, peas Milk or cocoa Raspberry jelly	Mashed potato, peas, Waldorf salad Milk or cocoa Raspberry jelly	Any vegetable Beef consommé Scrambled eggs and bacon Potato salad Lettuce salad
	Wednesday	
Liver and bacon, creamed potato, fruit salad Milk or cocoa Chocolate blancmange	Creamed potato, green beans, fruit salad Milk or cocoa Chocolate blancmange	Any vegetable Vegetable chowder Italian macaroni Fresh vegetable salad Lettuce salad
	Thursday	
Pot roast, mashed potato, carrots Milk or cocoa 2 oatmeal cookies	Mashed potato, gravy, onions, carrots Milk or cocoa 2 oatmeal cookies	Any vegetable Stuffed green peppers Split pea soup Crabmeat salad Lettuce salad
	Friday	
Lamb stew, potato, coleslaw or Fish cake, coleslaw and beets Milk or cocoa Ice cream	Tomato soup Peanut butter sandwich Milk or cocoa Ice cream	Any vegetable Fruit salad Tomato soup Lettuce salad

Other dishes on the menu daily include: sandwiches, milk, chocolate milk, cocoa, orange juice, tomato juice, cookies, ice cream, cake, rolls, fruit in dishes, fresh fruit such as apples, and lettuce salad.

An interesting experiment in catering to the food requirements of children from five to eleven years of age is being conducted in West Hartford, Conn. Menus are made out a week in advance and are reproduced in the local paper. The pupil may also take a copy home to his mother

The mothers were well satisfied with the service being rendered by the cafeterias. They told of instances in which their children had gained weight and in which they had acquired tastes for vegetables that they would not heretofore eat at home. From the suggestions offered at this meeting, we wrote the following letter explaining our proposed new system, sending one to each parent.

Sedgwick School Cafeteria,
West Hartford, Conn.

Dear Madam:

The school cafeteria is striving to teach good food habits. Since we are feeding a large number of children in the Sedgwick elementary school, we feel that when a child stays for lunch, there should be some guide so that he will obtain a well balanced meal. Last week we had a meeting of mothers whose children eat lunch with us frequently. We received many helpful suggestions and have decided to try the following plan, commencing Monday, November 21:

1. The children from the first and second grades will be served a lunch at their tables, for we have found that they are too young to go through a cafeteria line. Sample lunches with prices will be found on the attached sheet.

Question: If you have a child in the first or second grade who eats lunch at school, do you wish him to be served according to the above plan?.....
What priced lunch do you wish served?.....

2. The children in the other four grades may choose one of the lunches on the attached sheet or may choose any combinations of their own which accord with the following diet rules:

Diet rule No. 1. Each lunch must include a *hot* dish or salad.

Diet rule No. 2. Each lunch that contains dessert must contain only one dessert, that is, if it contains ice cream, it shall not contain cake or pudding.

Diet rule No. 3. Each lunch should contain only one "starch" dish, that is, a lunch with macaroni shall not include mashed potato.

Diet rule No. 4. No lunch shall contain more than two sandwiches or rolls.

Question: If your child purchases his lunch at school at any time, do you wish him to conform to the above diet rules? .....

3. There are some children who bring sandwiches and

who purchase some of their lunch. We feel that whatever they purchase should include a hot dish or salad.

Question: If your child brings his lunch do you wish him to adhere to these rules?.....

As the feeding of elementary children in a public school is a new project, we are anxious to have any suggestions you may care to offer which will aid us in teaching the children how to choose meals wisely.

Please answer these questions and return this sheet.

Yours very truly,
(Signed) MAE D. PAIGE, Director.

Along with this letter were sent the menus reproduced on the opposite page.

As most all of the letters were returned signed "yes," work was arranged to carry out this plan. The elementary menu is made out each week from the regular menu. It is posted in each room, and each pupil may copy it and bring it home to his mother. It is also printed in the local paper. This has proved to be good advertising as many of the parents did not realize how extensive a menu was being served.

The plan actually operates in the following manner. The teachers of the first and second grades send to the cafeteria each morning slips designating the lunch desired by each child. Payment for the meal accompanies the order. A few minutes before lunch the dietitian has the lunches set on trays and then has the trays placed in their proper places. When the bell rings, the first and second grade pupils go directly to their lunches at the tables. A teacher, who is supervising in the cafeteria, assists very young children who need help. The children from the third through the sixth grade go through the line as they can easily carry their own trays. Although they select their own lunches, they must adhere to the simple diet rules that have been taught them.

The dietitian finds it impossible to check every tray and so employs two sixth grade girls as assistants. These girls send back any child whose selection does not conform to the diet rules. Having the menus posted in the classroom increases the speed of serving. Each child knows what he wants when he arrives in the cafeteria. All of this has educational value because these children become acquainted with different types of foods and with balanced meals. In junior and senior high they select better lunches as a result.

Menus are constantly being changed; not only are new dishes added but the number of dishes served daily are increased. When different methods of counter setups, different types of dishes or different bookkeeping methods are discovered, we experiment with them. As every day brings new methods, every effort is made to keep our system up to date and thus to serve the community of West Hartford in the best way known to us.

Menus for the Holiday Season

As Suggested by

LUCRETIA F. BATTLES

Dietitian, Lincoln School of Teachers College, New York City

I. Mock duck (sliced round of veal made like veal bird)
Cranberry sauce
Mashed potatoes
Mashed or baked squash
Mince upside-down cake

II. Cream of tomato soup
Christmas wreath salad (plain apple with cream cheese, cherries and angelica)
Olive and cream cheese sandwiches
Pumpkin custard and whipped cream

III. Chicken loaf with mushroom sauce
Parsley potatoes
Buttered beets
Steamed cranberry pudding with cherry sauce

IV. Veal bird (leg of veal sliced and wrapped around dressing and baked in oven)
Mashed potatoes
Mixed fresh vegetables
Christmas wreath cake (two rounds of sponge cake with whipped cream between and cream on top, with cherries and angelica to decorate)

V. Hot chicken or turkey sandwich
Mashed turnip
Cranberry jelly
Toasted coconut and raspberry ice cream or pistachio toasted coconut and raspberry ice cream

VI. Grilled half tomato on toast with creamed fresh vegetables
Mushroom or slice of bacon garnish on top
Coleslaw salad with pepper and tomato garnish
Marshmallow graham and date roll

*Suggested Dishes**

Soup:
Cream of turkey or chicken
Tomato okra
Southern bisque (cream of corn and tomato)

Meat:
Chicken timbale on toast
Tuna fish timbale on toast
Baked stuffed tomatoes with chicken filling

Salads:
Jellied tomato soup and cream cheese
Tomato salad stuffed with cream cheese or cottage cheese
Poinsettia salad (tomato cut to look like poinsettia with chopped egg in center)
Jellied cranberry salad
Potato salad in tomato aspic

Desserts:
Crackers, cheese and jelly
Steamed fig pudding with sterling sauce
Stuffed dates with peanut butter and nuts
Snowballs
Little decorated Christmas wreath cakes, red and green icing

*Served as combination plate without dessert, which is extra, as are beverage and bread and butter.

THE NEWS OF THE MONTH

Willard E. Givens Is Made New Secretary of N. E. A.

Willard E. Givens, superintendent of schools, Oakland, Calif., was elected secretary of the National Education Association at a special meeting of the board of trustees held last month at St. Louis. Mr. Givens succeeds Dr. J. W. Crabtree of Washington and

will take charge of the association headquarters in Washington beginning January 1.

The five members of the board of trustees are: Joseph H. Saunders, superintendent of schools at Newport News, Va., chairman; H. L. Smith, dean of the school of education of the University of Indiana, Bloomington; Joseph M. Gwinn, retired superintendent of schools, San Francisco; A. L. Whittenberg, assistant superintendent of public instruction of Illinois, Springfield, and Edgar G. Dounda, secretary of the board of regents of Wisconsin's teachers colleges, Madison.

Dr. Einar W. Jacobsen will succeed Willard E. Givens as superintendent of the Oakland schools. Dr. Jacobsen has been Mr. Givens' assistant since 1931. William S. Briscoe, vice principal in charge of boys' guidance at Oakland High School, has been promoted to succeed Dr. Jacobsen.

Louisiana Modernizes Its School Tax System

Two important amendments relating to the financing of public education in Louisiana were voted upon favorably by the citizens of that state in the November general election.

These amendments, according to John M. Foote of the state department of education, will effect marked reductions in local property taxes for schools, will shift the greater part of the financial burden from the parishes to the broader shoulders of the state, will set up a state minimum educational program for all parish schools, will provide equal school opportunities throughout the state, and will set up a more equitable and modern basis for apportioning state school money.

State school funds will be segregated and kept in separate bank accounts and will be apportioned to the parishes in twelve equal monthly payments.

Present existing taxes yield approximately $6,000,000 a year to the public school fund. Under the new law the tax levy must provide a minimum of $10,000,000 for education.

The state fund will be apportioned in such a way that three-fourths of the money will be distributed on the basis of the number of educables from six to eighteen years of age in each parish, and the other one-fourth will be given to the poorer parishes so as to provide for a minimum educational program.

Selective Admission Brings Higher Freshman Ratings

The practice of accepting only those students who are in the upper two-thirds of their high school graduating class is believed to be bringing a superior student body to the University of Denver.

Tabulations just released by Dr. Lawrence W. Miller, professor of psychology, show that the freshman class ranks much higher in mentality and accomplishment than the average national rating of freshmen. Four tests were given: the American Psychological, the English Training, the High School Content, and the Reading Comprehension. Except for the last, where the average was only 5 per cent higher, this university's incoming class ranked from 15 to 30 per cent above the norm.

Advancement of Science Meeting Is in Pittsburgh

The meeting of Section Q (education) of the American Association for the Advancement of Science for 1934 will be held in Pittsburgh, on Thursday, Friday and Saturday, December 27, 28 and 29.

Three joint programs and three sectional meetings have been planned. On Thursday afternoon there will be a joint program with Section C (chemistry) and the division of chemical education of the American Chemical Society, concerning "The Rôle of Chemistry in Education." The Friday morning session will consist of detailed reports on selected experimental problems in education. The Friday afternoon program will be provided with the cooperation of Section I (psychology) and will relate to "Psychological Theories of Learning."

The annual dinner of Section I and Section Q will be held Friday evening at the Hotel Schenley, at which time the retiring vice presidents will present papers. The two sessions on Saturday will include reports of research from members of the section.

Salaries Show Slight Increase for This Year

A survey of teachers' salaries in 230 village and city school districts in Michigan, exclusive of the city of Detroit, shows that salaries have increased for the current school year from 5.4 per cent for superintendents to 10 per cent for the minimum teacher's salary. The average minimum teacher's salary for the 9,000 teachers in these 230 districts shows a decrease from $1,178 in 1930-31 to $873 in 1934-35, with the lowest minimum salary of $811 in 1933-34.

The average teacher's salary, in these districts, decreased from $1,471 in 1930-31 to $1,067 in 1934-35, with $994 as the average salary in 1933-34. The maximum teacher's salary shows a decrease from $2,235 in 1930-31 to $1,611 in 1934-35. A salary of $1,510 is shown to be the maximum teacher's salary in 1933-34.

Among the city school superintendents, the average salary has decreased from $3,609 in 1930-31 to $2,616 in 1934-35. The average salary for superintendents in 1933-34 was $2,481.

N.E.A.
February 23-28
Atlantic City, N. J.
Department of Superintendence
N.E.A.

THE NEWS OF THE MONTH

Sioux Falls Will Spend $600,000 Improving Schools

Approximately $600,000 will be spent in Sioux Falls, S. D., in improving and enlarging two existing school buildings. One of the projects, an addition to the Washington High School, was started in October, and the other, an addition to the Lowell School and improvements to the existing building reached the contract letting stage in November.

The Washington High School project is said to be the largest school construction job in South Dakota. The general contract alone for this improvement totaled $460,135.

The general contract on the Lowell School job was awarded on a bid of $95,578, and the entire cost of the project will be $129,021. The addition to this building will consist of a three-story structure containing a gymnasium, an auditorium, a locker room, a kindergarten, first, second and third grade classrooms and administration offices. A new ventilating system will be installed in the existing building.

Hugill and Blatherwick, Sioux Falls, are the architects for the Lowell School project.

Trade Shops Are Feature of Large Hershey School

Dedication of the group of thirteen new buildings of the Hershey Industrial High School, Hershey, Pa., took place on November 15, the twenty-fifth anniversary of the founding of the institution for educating and training orphan boys.

The buildings include a junior-senior high school and trade shops, together with a large auditorium, gymnasium and swimming pool. Five of the buildings are devoted to academic study and the other eight are shops. Three towers ornament the group, which is done in modernized Ionic style. The central tower contains a four-faced clock brought by Mr. Hershey from Cuba because of its melodious bell. It is illuminated at night and owing to the commanding position of building and tower on a ridge of the foothills of the Blue Ridge Mountains it can be seen for many miles over the level Lebanon Valley.

Construction was begun in the spring of 1933, and the shops were completed in time for the opening of the fall term this year. The floor space covers 5.1 acres.

The Hershey Industrial School is not connected with the Derry Township Public Schools in Hershey, said to be the largest consolidated school system in America. Both are gifts of M. S. Hershey, producer of chocolate.

High School Will Be Finest in All Kansas

A new senior high school building for Kansas City, Kan., will outclass all other secondary school buildings in the state, it is believed. It will cost $1,900,000, thirty per cent of the cost being borne by the federal government. The board of education has accumulated cash amounting to $450,000 to apply on the cost of the building and a special bond issue has been voted to cover the remaining expense. It will replace the Wyandotte High School which burned last year.

Sod Schoolhouse Serves Country Pupils in Nebraska

A sod house in Brown County, Nebraska, bears the proud sign "Lakeland High School, 1934." There ten rural pupils are getting ninth and tenth grade instruction under the teacher, E. E. Holm, who lives in a small annex at one end of the sod schoolhouse.

Money was so scarce that a number of parents could not send their children to the nearest high school, some thirty miles away. So patrons of Districts 12, 14 and 49 secured FERA labor to build the sod house near Enders Lake. Equipment was donated.

The teacher's salary is paid out of the regular school funds of the district, supplemented by donations. Only nonlaboratory subjects are taught. To get to this primitive school building, some pupils must travel from four to fifteen miles each morning and night.

Buys Larger Busses in Economy Drive

In an effort to reduce expenses, the consolidated school board at Bondurant, Iowa, has purchased four new busses and has enlarged its bus routes. Six bus routes were formerly in operation. The new busses are much larger.

Industry Volunteers to Equip New High School

Eight of the nine members of the board for the Regional District of Penns Grove and Upper Penns Neck Township, New Jersey, are executives or employees of E. I. Dupont de Nemours & Company dye works. First bids on the new high school building for the district had to be rejected because they exceeded the amount available for land, building and equipment, which was $315,000. New bids were sought but it appeared that a few rooms would have to be eliminated.

When the board again met, it was announced that the Dupont organization would donate $21,948 to furnish and equip the new building. This permitted the original construction plans to be carried out and the contracts were let for $269,873, subject to the approval of the PWA. The building will be ready for occupancy next September. It will be constructed on a 17-acre tract near the boundary line between Penns Grove and Carney's Point.

New Dormitory for Wooster

A new dormitory to house eighty girls at Wooster College, Wooster, Ohio, will be started early in the spring. The cost of this new building operation will be more than $100,000.

Work Is Progressing on Williamsport Buildings

Work is progressing steadily on additions to the Williamsport High School, Williamsport, Pa. Three projects are under way, a new vocational unit, an addition and alterations to the present high school building, and a new gymnasium building. The vocational unit, which houses electrical and woodworking departments, has been completed and is now in use.

The addition to the present building is under construction but will probably not be completed before spring. This unit, together with the alterations, will provide sixteen new classrooms, cafeteria and kitchen, band rehearsal rooms, music room, rehearsal room with stage for use of the English department and locker rooms.

Construction of gymnasium building will start in the spring.

THE NEWS OF THE MONTH

Chicago Study Reveals More Than One-Third of High School Pupils Show Early Tuberculosis Signs

One-third of the white pupils and 38 per cent of the colored pupils in six Chicago high schools show a positive reaction to tuberculosis, according to tests given under the auspices of the Chicago Tuberculosis Institute. Almost 7,000 pupils have been given the tuberculin test either during the last school year or this at the Lake View, Sheldon, Wendell Phillips, Tuley and Englewood high schools.

The Wendell Phillips High School is attended by colored pupils exclusively, and of the 1,668 pupils given the test, 37.2 per cent showed a positive reaction.

In addition to these tests, the 1933 Christmas Seal dollar financed 17,451 physical inspections of children in the city of Chicago and Cook County alone. Nurses from the Chicago Tuberculosis Institute obtained 9,154 corrections of physical defects among school children and 676 preschool children were given examinations. More than 400 dental clinics were held during the year and 4,223 dental treatments were given.

Medical examinations at the Chicago institute's health centers numbered 6,949. Nurses assisted local doctors in giving diphtheria immunizations and scarlet fever inoculations to 4,491 school pupils.

These statistics are said to be typical of the work being done throughout the nation with funds obtained from the annual Christmas Seal sale. Some 2,000 affiliated tuberculosis associations are financed by the sale of these seals. This is the twenty-eighth annual appeal made to the American public.

N. J. Teachers Return Pickell to Presidency

The New Jersey State Teachers' Association held its annual convention at Atlantic City, November 9-12. The general theme was "Education for the Future," and among the prominent speakers were Chester I. Barnard, president, New Jersey Bell Telephone Company; Rabbi Abba Hillel Silver of Cleveland; William Mather Lewis, president of Lafayette College, and Dr. Frank Ballou, superintendent of schools, Washington, D. C.

The attendance was the largest in history. Frank G. Pickell, superintendent of schools in Montclair, was elected president for the third consecutive term. His reelection established a precedent in that he is the first person in the eighty years' existence of the association who has been thus honored.

Other officers elected for the year were: Chester F. Ogden, past president; Leon N. Neulen, first vice president; Ella J. Hamilton, second vice president; Catherine M. Zisgen, treasurer, and S. C. Strong, secretary.

Executive committee members elected were: Mattie S. Doremus, Paterson; William R. Ward, Trenton; Mary D. Barnes, Elizabeth; Winton J. White, Englewood; William L. Fidler, Audubon; Juliet Roche, Jersey City, and W. Burton Patrick, Orange.

Officials of Three States Confer on Pupil Personnel

The first Tri-State Conference on Pupil Personnel met at Detroit, November 9 and 10. This conference is an outgrowth of the National League of Compulsory Education Officials and came into being because that body felt the problems of the handicapped child should be given special attention and that a smaller conference could study the situation more intelligently and efficiently.

The three states participating in the conference were Ohio, Indiana and Michigan. The first general session took the form of a luncheon meeting; Frank Cody, superintendent of the Detroit public school system, presided.

Mr. Ralph F. Dugdale, superintendent of schools, Toledo, Ohio, outlined the aims and purposes of the conference. He gave astounding figures concerning our country's mentally, physically and socially handicapped children and the need for more adequate service to these unfortunates, who find themselves out of tune both in school and in the life of the community.

Attendance at this first meeting was encouraging. Approximately 250 persons registered, 146 were from Michigan, 23 from Indiana, and 81 from Ohio.

Sectional meetings were held on Friday and were divided into three groups—county workers, city workers, and the section on state aid for public schools.

A dinner meeting sponsored by the Guidance Association was well attended. The special speaker was Dr. Arch O. Heck, Ohio State University, his address dealing with the ambitions, temptations, longings, successes and defeats of childhood. His main thought was "What are we as school people doing to adjust these problems?"

Dr. William Lowe Bryan, president of Indiana University and chairman of the state attendance committee, stated as the ideal of the attendance officer that of having "open paths from every corner of the state through schools to the highest and best things which men can achieve."

The 1935 conference will meet in Indianapolis. The following officers were elected: president, Arch O. Heck; vice president, A. N. Hennigar, Detroit; secretary, Samuel Fogle, Cincinnati, and treasurer, Margaret Paddock, Indianapolis.

State Superintendents to Meet in Washington

The annual meeting of state superintendents and commissioners of education will be held in Washington, D. C., December 10 and 11.

Called by State Superintendent Charles A. Lee of Missouri, president of the National Council of State Superintendents and Commissioners of Education, the meeting this year will take up a number of important educational problems. Commissioner Studebaker has urged not only state directors of education to attend the meeting, but also state directors of research or statistics, inasmuch as problems to be considered are related to the Federal Emergency Educational Program.

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THE NEWS OF THE MONTH

Census of Private Schools of Nation Shows Encouraging Increase in Attendance and Income

An increase in income of approximately $6,000,000 for the nation's private schools is indicated by the annual country-wide school census conducted by N. W. Ayer & Son.

The figure indicating the substantial increase in income for 1934 as compared with 1933 is computed from enrollment and tuition reports received from 167 private boarding schools. It is based upon the assumption that the situation disclosed by the reports of these schools is representative of private schools throughout the country and that all pupils paid the specified tuition. Increase in income was indicated for 69 per cent of the schools reporting.

Reports from 198 schools show that boarding school attendance has increased 8.7 per cent, compared with last year. Total 1934 attendance of boarding pupils is given as 19,845. Last year the figure was 18,253. Girls' boarding schools and junior colleges show the greatest increase over a year ago with a jump of a little over 13 per cent in attendance. Military schools come next with an increase of 11.6 per cent.

As compared with schools in other parts of the country, schools in the South show the most marked improvement in enrollment. Throughout the country, schools with a normal attendance of 50 to 100 are better off than both the larger schools and the smaller ones. Of the schools reporting, approximately one-third of the total attendance is composed of new pupils.

Private School in Garden Apartments Proves Success

Six additional schoolrooms have been added to the private school for the children of tenants in the Marshall Field Garden Apartments, Chicago. The new space permits the school to accommodate 125 additional pupils in its junior and senior kindergartens and three primary grades.

The school, progressive in nature, has been a factor in increasing occupancy in this great apartment project in which 622 families live under the same roof. Many of the mothers in the building work in offices and in the professions. They may leave their children at the school, where they get instruction, supervised play, a warm lunch and an afternoon nap.

Evening supervision of children is also provided by the school by special arrangement.

A limited number of children who reside outside the building may be accommodated, although preference is given to residents.

This huge housing project entered the renting market at the tag-end of the boom. It soon reported a high occupancy, which, however, did not maintain itself. Public relations counselors made a study of the situation and found that high in the list of weaknesses in the building's rental appeal was the type of public school available in the immediate vicinity. The establishment of a private school brought a sharp upturn in the occupancy chart of the building.

Drake Gets Million Dollar Estate

A million dollar estate has been presented to Drake University, Des Moines, Iowa, for use as a college of fine arts. The building is modeled after King's House, a Tudor mansion in Salisbury, England, and was presented by Mr. and Mrs. Carl Weeks of Des Moines.

Tax Is Placed on Private Schools in New York City

Private schools in New York City are no longer tax exempt, according to a preliminary ruling announced by the board of taxes and assessments. This is based on the premise that these institutions perform no function which the city would have to provide if they did not exist. It does not apply, however, to the parochial schools maintained by the Roman Catholic Church, these providing elementary instruction which the city would have to supply. Private schools, on the other hand, giving courses in etiquette and dancing, are offering instruction which the board does not believe the city would subsidize if they did not exist. Collegiate schools are not affected. The total value of the properties occupied by the schools has not been calculated, but it is believed that it will be at least $20,000,000 and perhaps twice that sum.

Declaring that both so-called private hospitals and private schools perform a public service, Howard S. Cullman, president of Beekman Street Hospital, New York City, in a letter to Mayor LaGuardia, vigorously protested against the proposed municipal tax on these institutions.

"Taxation, for many of our private schools, will prove a death penalty," Mr. Cullman declared. "Many of these institutions have been carrying as high as 75 per cent of scholarship pupils. Teachers and parents have been battling against terrific financial odds to keep alive, in these schools, the spirit and fact of educational progress. This is an essential cultural service. I would urge that an examination be made of the number of scholarship pupils and the annual deficit in each school before any sweeping classification of them is made as profit-taking enterprises subject to taxation. The proposed tax, in its present forms, would prove a social disaster."

Pennington School Benefits by Will

A bequest of $1,000,000 in the will of the late J. W. Sparks of Philadelphia has been made to the Pennington School for Boys, Pennington, N. J. Pending the settlement of the estate no decision has been made as to the disposition of the gift. Mrs. Sparks, who died in 1932, left the school $500,000, which was used for general improvements and renovations.

Mothers Act as Traffic Officers

The traffic policeman was removed from the corner of 63rd Street and Central Park West, New York City, recently. On this corner is the Ethical Culture School, of which Franklin C. Lewis is superintendent. Parents not only protested the removal of the officer but themselves took on the safe conduct of pupils across the street, mothers volunteering for traffic duty.

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THE NEWS OF THE MONTH

Plans Are Completed for Second Vocational Meeting

Final arrangements have been made for the second American Vocational Association convention to be held December 5-8 in Pittsburgh. Particular interest is promised in the programs of the home economics and the part-time and industrial sections.

Elizabeth Amery, state supervisor of home economics education in Maryland, and vice president in charge of the home economics section, is in charge of that program. Dr. George P. Hambrecht, director of the State Board for Vocational Education, Wisconsin, is responsible for the part-time trade and industrial education section, and Dr. Robert L. Cooley, active in the adult education movement in the United States, is scheduled to appear on several programs.

Dr. Ben G. Graham, superintendent of schools, Pittsburgh, is honorary chairman of the convention and is being assisted by Frank M. Leavitt, associate superintendent of schools, Pittsburgh, as chairman, Fred W. Boland, director of trade training, Pittsburgh, as vice chairman, and Dr. G. D. Whitney, director of vocational teacher training, University of Pittsburgh, as secretary.

Psychiatrists Discuss Their Duty to Children

Helping mankind in general, but children particularly, achieve a sane perspective on a world in which values are likely to change overnight was considered by 600 psychiatrists and others interested in mental health at a meeting held November 14 at the Waldorf-Astoria, New York City. The occasion of the conference was the twenty-fifth anniversary of the National Committee for Mental Hygiene, sponsor of the meeting.

The greatest work accomplished thus far by mental hygienists was defined as impressing upon the layman the fact that mental health is similar to physical well being and has to be treated scientifically.

Among the speakers were: Dr. Carleton Washburne, superintendent of schools, Winnetka, Ill.; Dr. James R. Angell, president, Yale University; Dr. Jacob Gould Schurman, former president, Cornell University and former ambassador to Germany; Dr. Arthur H. Ruggles, president, National Committee for Mental Hygiene; Dr. Clarence H. Hincks, general director of the committee, and Dr. James S. Plant, director, Essex County Juvenile Clinic, Newark, N. J.

New Bibliographies Treat Adult Classes, Buildings

Two sets of bibliographies of interest to school executives are announced this month.

One on adult education lists 369 books and pamphlets in this field, fully annotated and introduced with a timely discussion by the authors, Dr. Wray H. Congdon, director of admissions at Lehigh University, and Dr. David D. Henry, assistant superintendent of public instruction in Michigan. A list of adult educational agencies is included with the bibliography, which is published by the Michigan School Service Company, Lansing.

The bureau of cooperative research at Indiana University has published the following: Second Revision of the Bibliography of Educational Measurements by Henry Lester Smith and Wendell William Wright; Bibliography of School Buildings, Grounds and Equipment, Parts I, II and III, by Henry Lester Smith et al.; Bibliography of School Surveys and of References on School Surveys by Henry Lester Smith and Leo Martin Chamberlain, and Bibliography of College Buildings, Grounds and Equipment by Smith and Noffsinger.

Coming Meetings

Dec. 5-8—American Vocational Association, Pittsburgh.

Dec. 10-11—National Council of State Superintendents and Commissioners of Education in the United States, Washington, D. C.

Dec. 19-21—New York State Association of District Superintendents, New York City.

Dec. 26-28—Pennsylvania State Education Association, Harrisburg.

Dec. 27-29—Education Section, American Association for the Advancement of Science, Pittsburgh.

Jan. 2-4—Florida Education Association, Jacksonville.

Feb. 23-28—Department of Superintendence, National Education Association, Atlantic City, N. J.

April 24-27—American Physical Education Association and its Eastern District Society, Pittsburgh.

Political Miracle in Iowa

Agnes Samuelson, state superintendent of public instruction in Iowa and a member by election of the executive committee of the National Education Association, received unusual recognition in the recent state election by being returned to office for a third term by the unanimous vote of the people of Iowa. Because of her cooperation, her efficiency and the general satisfaction with her administration, both major parties united in her support.

Three Oregon Meetings Attract Wide Attendance

Committee reports on local professional organizations, character education, criteria of high school teacher selection, objectives of secondary education, correspondence study of high school subjects, and honor society directive committee were given at the sixth annual conference of Oregon High School Principals held in Salem, October 26 and 27.

Approximately 326 unemployed teachers attended the five regional three-day training conferences held at Salem, Ashland, Eugene, Portland and La Grande prior to beginning the work of teaching adult classes in the educational relief program in Oregon.

Regional consultants of the joint commission on the emergency in education from the states of Idaho, Washington, Nevada and Oregon attended a regional conference in Portland, November 3. Herbert S. Weet, superintendent of schools, Rochester, N. Y., and William G. Carr, director of research division, National Education Association, represented the joint commission on the emergency in education, and state superintendents from the various states presented reports from their respective states.

Mrs. Roosevelt Talks on Education

Under the general subject of "Americans of Tomorrow," Mrs. Franklin D. Roosevelt is speaking over a nationwide Columbia Broadcasting System network to the parents and teachers of the country. This series of six broadcasts started November 11 and will continue from 7:45 to 8 o'clock each Sunday evening. Each of her talks deals with some phase of education.

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Austin, Texas

SCHOOL FOR THE BLIND
Columbus, Ohio

MOUNT PLEASANT ELEMENTARY COLLEGE
Mount Pleasant, Michigan

ALBANY AVENUE SCHOOL
Freeport, Long Island

WESTFIELD JUNIOR HIGH SCHOOL
Westfield, New Jersey

UNIVERSITY OF TENNESSEE
Knoxville, Tennessee

YALE UNIVERSITY
New Haven, Connecticut

GREENWICH HIGH SCHOOL
Greenwich, Connecticut

ATLANTA UNIVERSITY
Atlanta, Georgia

CONNECTICUT COLLEGE FOR WOMEN
New London, Connecticut

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IN THE EDUCATIONAL FIELD

Eastern States

ALLAN VANDERHOEF HEELY has been elected headmaster and trustee of the Lawrenceville School near Princeton, N. J., succeeding the late DR. MATHER ALMON ABBOTT who died last May. Mr. Heely, was assistant dean of Phillips Academy, Andover, Mass. After graduating from Yale in 1919, he was in business in New York City for five years before entering the teaching profession.

At the age of 76, WILLIAM DICK, connected with the business management of the Philadelphia school system for more than fifty years, died. He was secretary of the board of public education for more than twenty-two years.

REV. BROTHER ALBERT GEORGE, F.S.C., principal of St. Augustine's High School, Brooklyn, N. Y., died as a result of a heart attack. Brother George, who was 45 years old, had been in poor health for two months.

BRIGADIER GENERAL THOMAS DURLAND, retired principal and commandant of the Bordentown Military Institute, Bordentown, N. J., died recently in Chicago. The school was founded by his father. Last year General Durland was president of the Association of Military Colleges and Schools of the United States. During the World War he was commander of the 163rd Infantry.

JOSEPH M. ARNOLD, superintendent of the Mercer County Schools, Trenton, N. J., will retire this month after twenty-nine years of service in that capacity. A testimonial dinner was given him recently. The commissioner of education has appointed as Mr. Arnold's successor HOWARD D. MORRISON, principal of the Junior High School No. 3, Trenton.

HERFORD A. SMITH, formerly principal of Philmont High School, Philmont, N. Y., has been chosen district superintendent of the third supervisory district of Rensselaer County, New York.

Governor Cross was the principal speaker at the unveiling of the portrait of FANNY E. DAVIES, founder and present principal of the Wykeham Rise School, Washington, Conn., recently presented to the school by its alumnae.

HAROLD V. HAGER has been appointed principal of the West Junior High School at Binghamton, N. Y., succeeding CARRIE E. HENRY, who retired after forty-two years of service in the public schools of New York State.

DR. HANS RADEMACHER, formerly professor of mathematics at the University of Breslau, Germany, has joined the faculty of the University of Pennsylvania for one year.

Pneumonia caused the death last month of ELWOOD JONATHAN MCGUIGAN, principal of the North York High School, York, Pa.

S. HOWARD CHACE, superintendent of the Beverly schools, Beverly, Mass., for twenty-one years, died on October 24 at his home in Boston where he had been ill for some time.

Formal installation of DR. CHARLES S. MILLER as president of the state teachers' college at Slippery Rock, Pa., took place on November 10. DR. CARMON ROSS was inducted into the office of president at the Edinboro teachers' college on November 24.

The new superintendent of schools of the first supervisory district of Tioga County, New York, is HIRAM M. NICKERSON, formerly of Kingston. He fills the vacancy caused by the death of ARTHUR E. BELDON.

DR. JAMES B. WELLES, superintendent of schools at Roslyn, N. Y., for twelve years, is now the principal of the state normal school at Geneseo, N. Y., succeeding DR. WINFIELD A. HOLCOMB, who retired last June.

JESSIE BLIVEN COLBURN, principal of the Richard Kelly Junior High School, New York City, died suddenly at the age of seventy. Miss Colburn was formerly president of the New York Women Principals' Association.

DR. JOSIAH H. PENNIMAN, provost of the University of Pennsylvania and professor of English literature, has been awarded the Cross of the Legion of Honor of France by the president of the French republic. It was formally presented on November 14 by Marcel de Verneuil, French consul general in Philadelphia, in recognition of Doctor Penniman's services to French literature and to Franco-American intellectual relations.

EDITH F. HOLT, principal of the L. D. Batchelder School, North Reading, Mass., died on November 10. She had taught 44 years in the North Reading schools.

FRANK M. BUCKLEY has been appointed the superintendent of schools of District No. 2, Tuckahoe, Westchester County, New York. The state board of education recently made an official survey of the district to determine whether or not its census exceeded the 4,500 minimum required by law for a district to install its own superintendent. The official report showed the district to have a census of 5,638.

WILLIAM J. BALLARD, former superintendent of schools in Jamaica, Queens, New York, and assistant superintendent of physical education in the Borough of Queens, died at the age of 88 years. Mr. Ballard retired from his educational work several years ago.

Southern States

Governor Ehringhaus of North Carolina has appointed CLYDE A. ERWIN of Rutherfordton to fill out the unexpired term of state superintendent of public instruction left vacant on October 20 by the death of DR. ARCH T. ALLEN. Doctor Allen had served as state superintendent for eleven years and was 59 years old at the time of his death. Mr. Erwin has been superintendent of schools in Rutherford County for nine years and is a former president of the North Carolina State Education Association.

REV. ALBERT BIEVER, S.J., founder of Loyola University of the South, died at the age of 76 of a heart attack. Father Biever served as president of the university for ten years.

DR. SHELTON JOSEPH PHELPS was inaugurated third president of Winthrop College, Rockhill, S. C., before a notable gathering of educators and state officials. Doctor Phelps succeeds as president DR. JOHN P. KINARD, now president emeritus. Dr. David Allen Robertson, president of Goucher College, was among the speakers at the inaugural ceremonies.

THOMAS R. ELBERT is now serving as principal of Princeton High School, Princeton, W. Va. He occupied a similar position at McComas High School.

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Comes this statement:

"The program of the future is so to train the individual from early life as to prevent many of the present ailments which are due to poor posture. His interest in his own maximum physical efficiency should be aroused by education."

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shown to the right, induces natural, comfortable, correct posture. The tilting and sliding desk top insures reading or writing at the correct focal distance and proper angle of vision. Eyestrain and body fatigue are reduced to a minimum.

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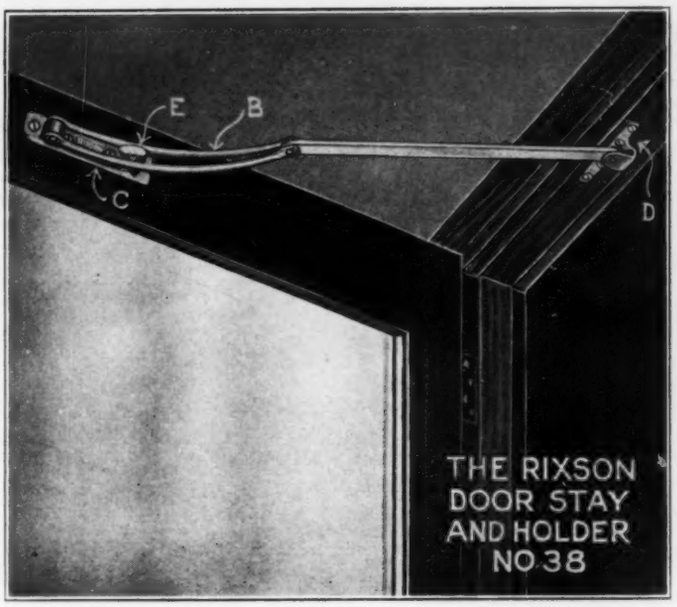

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IN THE EDUCATIONAL FIELD

E. R. VAWEER and L. A. TONEY are new assistant superintendents of the schools of Fayette County, W. Va. The former is assigned to high school supervision and the latter to Negro elementary schools.

T. W. STANLEY, who served as superintendent of schools at Weatherford, Tex., for twenty-eight years, retiring in 1932, died recently. He was seventy-four years of age.

DR. WALTER SCOTT ATHEARN, president of Oklahoma City University, died suddenly in St. Louis as a result of a heart attack. Doctor Athearn was formerly president of Butler University at Indianapolis.

Williamstown, W. Va., has a new high school principal in E. S. SHANNON, formerly head of the Guyan Valley high schools in the same state.

JAMES ANDREW WOOFTER has resigned as principal of Walton High School, Walton, W. Va., to become head of the department of education at Alderson Broaddus College, Philippi, W. Va. L. D. MOORE is the new principal of the Walton High School. He previously served as assistant superintendent of the schools in Roane County, W. Va.

B. FORD DEVER is the new principal of the high school at Ansted, W. Va.

JAMES WILLIAMS is now serving his first term as principal of McComas High School, W. Va. NORTON PLYMALE is the new administrator at Wayne County High School, E. B. PHARES at the Capon Bridge High School and FLOYD M. HOCKMAN at the Augusta Consolidated School in Hampshire County, W. Va.

Middle Western States

No opposing candidates took the field against the following Kansas county superintendents and they were returned to office in the November elections: MRS. BLANCHE MCNERGNEY, Nemaha County; MRS. HADA MOYER NELSON, Doniphan County; RALPH PATTERSON, Jackson County, and P. W. KIRKPATRICK, Marshall County.

E. E. TATUM, for twelve years school superintendent at Prairie City and Earlham, Iowa, has abandoned school administration for the grocery business in Gilbert, Iowa.

WALTER J. KRICK has been chosen the new superintendent of schools at Decatur, Ohio, succeeding the late M. F. WORTHMAN, who died a few months ago after serving as superintendent for eighteen years. Mr. Krick has been principal of the high school in Van Wert, Ohio, since 1930.

CHARLES H. COOPER, president emeritus of the State Normal School, Mankato, Minn., died recently at the age of 79 years. He retired from active work four years ago after having served as president for thirty years.

MRS. ELVERA G. MORRISON, St. Clair county school commissioner, Michigan, recently gave the chief address at ceremonies attending the laying of the cornerstone of the new two-room fireproof school at Harsen's Island. Last year the building that had served this small community for eighty years burned, and since then the fifty-five pupils have been attending school in the community hall.

JOHN WARD is superintendent of schools at Taylor, Neb., succeeding F. E. SORENSON, who heads the school system at Syracuse, Neb.

FRED J. MILLER, principal of East High School, Waterloo, Iowa, is now in his twenty-second year in that office. He is known as the dean of Iowa high school principals.

PAUL HANSON, is serving his first year as superintendent of the schools at Barnesville, Minn. He is succeeded at Halstad, Minn., by ALVIN HALVORSON of Detroit Lakes.

The Roundhead schools in Hardin County, Ohio, have a new principal in VAYNE GALLADAY.

The Woodston Rural High School, Woodston, Kan., is now being administered by M. H. ISAACSON as principal.

While hunting ducks along the Mississippi River, ROBERT D. NOBLE, superintendent of the public schools in McGregor, Iowa, was seriously wounded when his gun accidentally discharged as he was changing oars in the boat, the bullet passing through his neck and shoulder.

W. W. HINKLEY, formerly of Kingsdown, Kan., is superintendent of schools at Spearville, Kan. He is succeeded at Kingsdown by WILL SEACAT.

When the present school year ends, fifty-nine years will have elapsed since the appointment of the first superintendent of public schools in Ottumwa, Iowa. There have been only three incumbents in that office in the entire period, ROY F. HANNUM, the present superintendent, having been appointed in 1927. The average term of office has thus been more than nineteen years.

PEARL ELLIOTT has succeeded C. A. SARGENT as principal of the Belmont Rural High School in Kingman County, Kansas. Mr. Sargent has gone to Portis, Kan., as high school principal.

SUPERINTENDENT THOMAS H. ADAMS of Verdigre, Neb., has been named the president of the newly organized Knox County Schoolmen's Association. Twenty men from nine of the eleven towns in the county attended the first meeting of the organization.

PRUDENCE CUTRIGHT, director of the curriculum department of the Minneapolis schools, has been appointed assistant superintendent of schools in charge of all instructional problems. She is successor to ELIZABETH HALL, who resigned.

WAYNE WINKLE has gone to Darke County, Ohio, as superintendent of the Hollansburg schools. Previous to this appointment he was head of the school system in Verona, Ohio.

MALCOLM J. CRAWFORD, superintendent of the Caro, Mich., public schools, died recently at the age of 43 years. PHILIP KOOPMAN succeeds him.

ELWYN CAMPBELL has been chosen superintendent of schools at Pleasanton, Kan. He had served in like capacity at Humboldt, Kan.

McGrew, Neb., has chosen MARY LOUISE FRENCH as superintendent and RAYMOND MALEY as school principal.

At a recent special dinner and program W. P. VON LEVERN, new principal of the Lincoln Junior High School, Minneapolis, was honored and appreciation was expressed of the work of ALBERT M. BANK, former principal and now head of North High School in that city. The P.-T. A. sponsored the dinner and representatives of other schools and of the board of education attended. Five two-column photographs of the event appeared in the *Minneapolis Tribune* next day.

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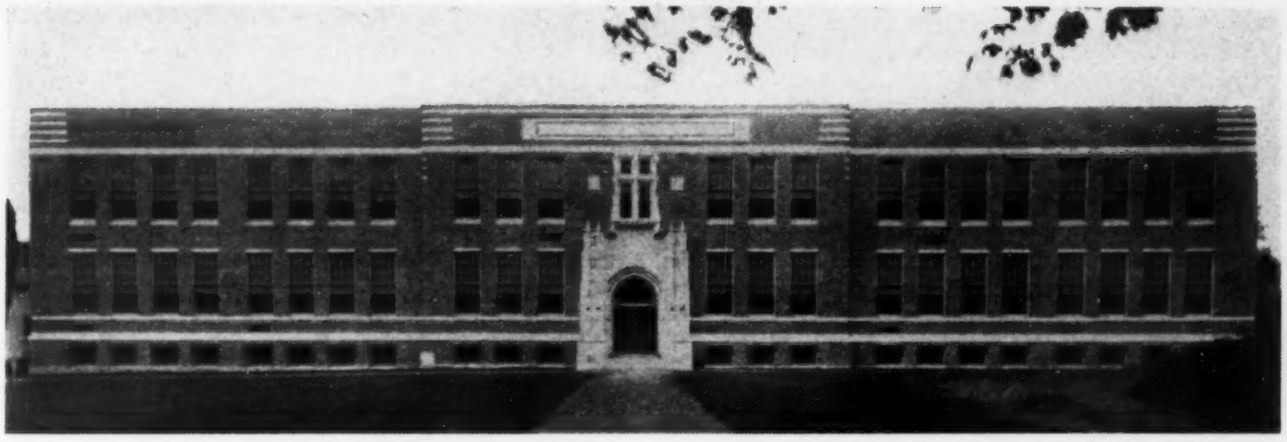

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R. M. HARTMANN of Mullen, Neb., is the new president of the Sandhill Schools' Association, including the schools of Bingham, Ashby, Hyannis, Whitman, Mullen, Seneca, Thedford, Halsey and Dunning. The association sponsors contests in basketball, dramatics, music and academic subjects.

LAWRENCE KREECH is serving his first year as superintendent of St. Paul public schools, St. Paul, Kan.

After five years as principal of the high school at Owatonna, Minn., IRVIN E. ROSA has been made superintendent of schools in that town. J. J. SKINNER, former superintendent, now heads the school system at Fairmont, Minn. The new principal of Owatonna High School is A. H. MENNES, formerly of International Falls High School.

W. S. ICKLER, superintendent of schools, Sholes, Neb., recently sent out a letter to all of the school patrons. Its friendly spirit has made it a factor in developing public relations.

Washington County, Kansas, reports several changes in school executive personnel. GEORGE L. ANDERSON is the new principal of Morrowville Rural High School. M. S. KAUFMAN is superintendent of schools at Hanover, and H. C. HUMAN is superintendent of schools at Barnes.

ROY HELLER is the new superintendent of schools at Galesburg, Kan., succeeding JOHN O. BOWDEN, who is now on the high school staff at Bentley, Kan.

The superintendent of the Edison public schools, Edison, Neb., is H. E. GOODWIN, formerly superintendent of the Milburn, Neb., consolidated public school.

Western States

FREDERICK W. HILE, dramatic actor and teacher in Denver, has been added to the faculty of the University of Denver. He will instruct classes in dramatic arts and speech.

Asks Help of High Schools in Good Driving Campaign

With statistics indicating that far too many automobile accidents involve young persons, the National Safety Council is attempting to reach the high school pupils of the country.

In order that the high schools may have concrete methods of procedure in this effort, the child education section of the council has prepared courses of study adaptable to schools of many types and sizes, which are printed in "Good Driving — A Manual for the High School," just off the press.

"Statistics indicate that the high point for accidents occurs among drivers considerably under 30," says Albert W. Whitney of the National Safety Council. "A railroad does not put a man in charge of a locomotive until he has had years of training, yet in some states, mere children, and with no training, are legally able to operate high-powered cars and in no states at the present time have specific agencies been set up for teaching young people how to drive."

Brookline Schools Give Pupils Money Training

After six years during which the children in the schools of Brookline, Mass., a suburb of Boston, have been taught the principles of money management, the school authorities recently conducted a survey of results.

The survey reveals that not only the children but their parents have greatly benefited from the six years of financial education. Brookline is said to reflect the increased financial intelligence of its younger inhabitants. Savings accounts in their banks are larger. Financial obligations are regarded more seriously and are not incurred without more deliberate consideration than formerly. There is less haphazard spending but more money is available for those things that improve the home life.

When this course on money management was first introduced into the Brookline schools it was new and untried. Textbooks were written by Florence Barnard, the first manager of economic education in Brookline, now educational director of the American Association for Economic Education.

Indians Open "Trachoma School"

In the former Indian Service Theodore Roosevelt Boarding School on the Fort Apache Reservation in Arizona a "trachoma" school has been opened which will accommodate approximately 300 children. Here the schooling is entirely subservient to the handicap of diseased eyes and no educational work is given that will in any way interfere with the trachoma treatment. Among some tribes this dreaded ailment is said to afflict as many as 40 per cent of the entire population.

N. Y. U. Receives Grant for Adult Education

New York University has received an emergency grant of $50,000 from the General Education Board to conduct a program of teacher training and research in connection with the emergency adult education activities in New York City. A part of the grant will be used to strengthen the administrative and supervisory staff conducting the adult education program.

The program will be under the direction of Dr. Ned H. Dearborn, acting director of the university's division of general education, and will be planned and conducted in cooperation with Dr. L. A. Wilson, assistant state commissioner for vocational education, who is in charge of emergency education for New York State; Superintendent Harold G. Campbell; Associate Superintendent William E. Grady, and Dr. Morris E. Siegel, all of the city board of education.

The General Education Board's emergency grant will supplement the $1,500,000 of relief funds that has been appropriated for the state adult education project in New York City.

Junior High Offers Angling Course

Press reports from Kansas City, Mo., announced the opening on November 22 of a course in angling at Westport Junior High School. The classes will be taught by Frank De Cou, former district game warden. Fundamentals of fishing will consume the first lessons; later the pupils will learn how to cast a fly through low underbrush so that it will arrive as a lure for fish and not for birds.

Amherst College Receives Bequest

A bequest of $1,000,000, the largest ever left to Amherst College, has been received by that institution under the will of Frank L. Babbott, philanthropist of Brooklyn, N. Y. In accordance with Mr. Babbott's will, an endowment fund has been established to be known as the Frank Lusk Babbott Endowment, the income of which will be available for general purposes.

Ohio County Builds Four New Schools

Contracts have recently been let for four rural school buildings in Carroll County, Ohio. R. H. Hunter, architect of Wooster, has drawn the plans and specifications. The Lee, Augusta, Union and Monroe rural districts will construct the schoolhouses.

STAGE LIGHTING

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A WIDE variety of lighting devices, accessories, parts and supplies needed for stage lighting is included in the Kliegl line of theatrical specialties—footlights, borderlights, spotlights, floodlights, stage effects, color wheels, etc. Also wiring devices—connectors, plugging boxes, stage floor pockets, wall pockets, and the like. All reliable products of modern design at moderate prices.

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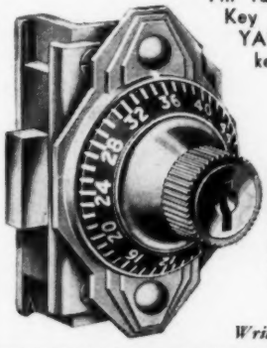
YALE Combination Padlock No. 649



At left—**YALE** Combination Locker Lock No. L3374 Masterkeyed. Combination can be changed with each change of locker occupant.

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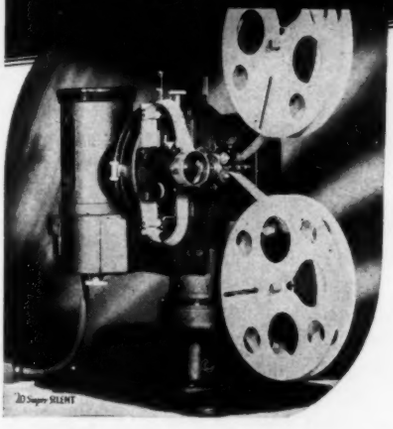

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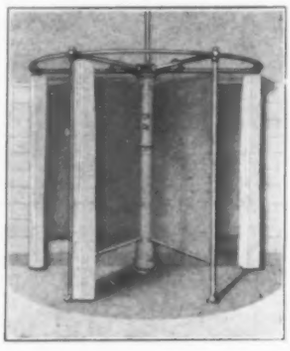
Greater Economy Claimed for New Group Shower

A new semicircular group shower has been introduced by the Bradley Washfountain Co., Milwaukee.

The new shower accommodates three users at one time, each in a separate, roomy compartment, and yet requires only three plumbing connections—two supplies and one drain—thus affording marked installation economies. In addition, the fixture reduces water consumption and, by means of an especially designed Bradley mixing chamber practically eliminates the scalding hazard, according to the manufacturer.

The framework of the shower is constructed of seamless steel tubing,



partitions are of heavy patent leveled sheet, and the entire unit is finished in artillery-gray baked enamel. It is equipped with white duck curtains and may be had with supply connections from above or below.

Electric Dishwasher Fits in Small Space

An electric dishwasher that is adaptable to either small or large kitchens, simple in design and low in price, has been announced by Surgex Manufacturing Co., Fourth and Madison Streets, Oakland, Calif. This Surgex is built in but one pattern and size. Capacity is determined by the combination of sinks and arrangement of units. It has only one moving part, the impeller, which is connected directly to the motor.

When dishes are to be washed, the machine is set in the sink and the cord is plugged into the light socket. The dishes, set edgewise in the basket, are placed directly in front of the machine with the sink compartment about half full of water. By the Surgex method, all dishes are first soaked in tepid water, where most of the food drops off or is softened, then washed in hot, soapy water and finally rinsed in scalding water.

The machine is designed for use with sheet metal sinks of two, three and four compartments. Any desired combination of sinks may be had, depending upon the size and shape of the kitchen.

A Cleaning Paste for Metal and Glass Surfaces

A paste particularly adapted for cleaning metal surfaces, glass, procelain and enamel has been added to the line of cleaners manufactured by Parko Products, Inc., 8 Hathaway Place, Glen Ridge, N. J. This new cleaner is called Parkolite. It is used without water. The general utility of this paste, the manufacturer states, makes it possible for schools to reduce their inventory of cleaning materials, as it replaces certain items that they would ordinarily be required to stock.

This Will Interest the Cafeteria Manager

A joint announcement by the Mellon Institute of Industrial Research and the Buromin Company, Pittsburgh, tells of the development of a new cleansing compound for mechanical dishwashing, Calgonite, which eliminates the necessity of wiping and drying glassware, chinaware and aluminum trays, it being noncorrosive to this metal.

Under present day practice, even when dishes are rinsed at a sufficiently high temperature to ensure rapid, spontaneous drying, wiping and drying are ordinarily necessary to avoid "lime stains." Calgonite contains sodium hexametaphosphate, an agent which, it is said, completely sequesters the lime and magnesia content of water and prevents the precipitation of lime soaps and the formation of insoluble films.

Another advantage of Calgonite, it is said, is that it does away with the necessity of deliming and cleaning the washing machine with acid.

New Cash Register for School Cafeterias

An important requirement of school cafeteria operation is rapid, efficient serving of pupils. Time is limited. The line must move quickly. And the speed with which the line moves depends to a large degree upon the machine used at the bottle neck of the line—the cash registering machine.

For this important cashier's job, a new type of cash register is offered by Burroughs Adding Machine Company, Detroit. Its light key touch permits speed and ease of operation, according to the manufacturer. Its large indication figures, which read the same to the cashier and to the pupils, are easily

readable and contribute to a quicker settlement of the bill.

This new cash register has many protective features to help the school control its cafeteria business. Perhaps the two most useful features in this respect, it is stated, are the automatic total of cash taken in at each meal and the number of pupils served.

Burroughs also manufactures tray checking machines for schools which prefer to give each pupil an itemized receipt for food purchased.

Low Priced Microscope for Biology Classes

A low priced, standard size microscope designed to meet the needs of elementary biology classes has been placed on the market by Spencer Lens Company, Buffalo, N. Y.

The Spencer No. 66 is finished in satin black and chromium. Features of the instrument include an automatic lubricating device for bearings, standard Spencer objectives and eyepieces, a body tube stop to prevent breaking of slides, a solid bakelite stage, a rotatable disk diaphragm, a nosepiece with dual conical bearings, steel stage clips and a standard concave mirror.

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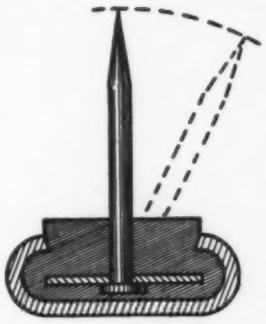
"BUT! DARNELL GLIDES DESERVE THE CREDIT FOR THAT-!"
SHES A SMART TEECHER



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Half of the responsibility for quietness in the schoolroom rests upon the teacher. The wise teacher, knowing the nuisance of noisy chairs and "incorrigible" furniture, will insist that all movable furniture in the schoolroom be equipped with

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Velva-Terry robes are available in all colors. Special color combinations can be provided. If desired, school name in bright block letters can be added at slight additional cost. Swimming and gymnasium classes in these colorful robes have a smartness of appearance that appeals favorably to the student body. And your costs for maintenance are at a minimum.

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Forse shades, used in schools for twenty years, are made in ten different styles. Many rural schools use the Forse folding shade without spring rollers. Others prefer our single roller adjustable or the "upside down" shade. The finest of all is the Forse Duo-Roll, used in beautiful modern buildings. Forse Greytone fabric is soft finish, rich looking and truly wear-proof. For dark rooms, laboratories, Forse Nelux opaque is preferred. Special brackets and fixtures. Forse shades fit any window. Samples, estimates and suggestions upon request.

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An Auxiliary Device for Washing Glasses

School kitchens have come to accept as an economical necessity the automatic dishwasher. Now comes its twin brother, the glass washer, to eliminate extra labor, save on hot water expenses, increase sanitation, decrease breakage and, above all, create satisfaction among those using the school's food service.

The new glass washer placed on the market by General Electric Co., Cleveland, is sold as an auxiliary to its regular line of dishwashing machines, thus decreasing original costs.

The Model A dishwasher is the unit ordinarily recommended to be used with the glass washer, although any of the sink models will do. The rubber dishwashing trays are merely replaced with a special set of glass washing trays. Combined water action and recognized soaps or detergents will turn out clean glasses without toweling, it is stated. Silver may also be washed in the new device.

Multiple Blackboard

The swinging type blackboard is a useful piece of equipment in the classroom. The new Multiplex Blackboard equipment consists of four swinging, slate filled panels that pivot in a frame attached to the wall in the front of the classroom. Multiplex Display Fixture Co., 910 North Tenth Street, St. Louis, is the manufacturer.

Both sides of slate panels are usable, thereby providing eight display surfaces, each 42 inches wide by 36 inches high, or 84 square feet of usable writing surface. The panels fold back to either side against the wall easily. Thus material that requires advance preparation may be kept concealed until the teacher is ready to present it to the class.

The illustration at the bottom of this page shows the blackboard installed with tubing support. Adjustable features take care of the different widths of chalk rail in front of which the upright tubing is placed. The blackboard is also furnished without the upright to fasten direct to the wall.

New Steam Trap Is Light and Compact

A combination float thermostatic trap has been added to the line of steam traps manufactured by Sarco Co., Inc., New York City.

The trap is compact in design and light in weight and can be supported directly on the piping, according to the manufacturer. The inlet and the outlet are on the same side, a small vertical distance apart for easy connection to horizontal pipes. The working pressure of the trap is given as 180 pounds per square inch.

All working parts are on the cover and can be exposed for cleaning by removing the trap body and without disturbing the connections. The automatic air by-pass is arranged on the downward side of the trap, so that the thermostatic element is at no time exposed to the full steam pressure. This arrangement, it is claimed, prevents the trap from becoming airbound.

Oil Cooking Equipment for School Kitchens

A new line of cooking equipment designed for school kitchens and similar institutions where large scale cooking operations are carried on is offered by the Motor Wheel Corporation, Lansing, Mich.

Both oil burning cooking ranges and bake ovens are included in the line and, in addition to high standards of cooking performance, they are claimed to afford large savings in the costs of fuel. Burning ordinary No. 1 fuel oil or furnace oil, these ranges and bake ovens are characterized as being fast, clean and odorless. Their construction, it is claimed, is such as to give uniform temperature distribution both in the ovens and on the French type cooking tops.

The burner employed is of the natural draft type. It has no moving parts, and a convenient oil control enables the user to adjust the burner to any desired temperature at a moment's notice. In addition to affording savings in fuel costs, these ranges and ovens are said to offer savings in food shrinkage.

The oil burning bake oven is offered in a four-tray size with a capacity for forty-eight 1½-pound loaves of bread

or twenty-four 10-inch pies, while the range units are available to meet requirements up to the largest school.

A Portable Electric Shaper for Schools

An electric shaper is a valuable tool in the school repair shop and in the manual training department. The improved electric shaper announced recently by J. D. Wallace and Company, 134 S. California Avenue, Chicago, is a high speed, portable machine for small runs of molding, beading grooving, shaping and tenoning.

Recent improvements include a large horizontal handwheel adjustment which enables the operator to raise or lower the table without changing the position of the table in relation to the operator. Improvements have also been made in the fence for straight shaping, according to the manufacturer. A standard toggle switch with a protecting cast iron covering prevents accidental closing of the circuit.

Wood Seal for Floors

A penetrating wood seal designed to harden the surface of floors and impregnate the floor with a rot-resisting combination of natural oils is announced by Franklin Research Company, Philadelphia. Chekit is said to eliminate costly maintenance, because it stops splintering and dusting, checks decay and does away with the need for sanding and scraping.

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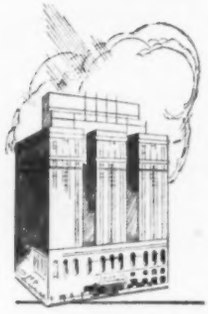

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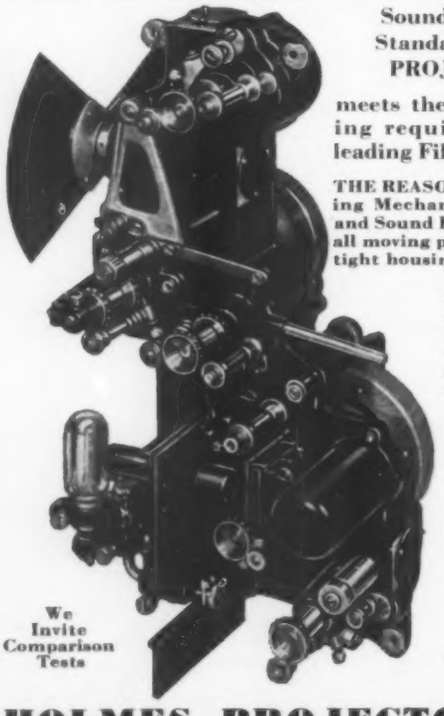

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EDUCATION AND EMERGENT MAN. *By William C. Bagley. New York: Thomas Nelson & Sons,* 1934. *Pp.* xiv + 238. $2.

The mature production of a keen and able thinker, this readable book should be of extreme value to administrators and teachers. It merits a place in every professional library.

ANCIENT AND MEDIEVAL HISTORY. *By Ralph V. D. Magoffin and Frederic Duncalf. New York: Silver, Burdett and Company,* 1934. *Pp.* 860.

Interestingly written and profusely illustrated is this secondary textbook covering the field of ancient and medieval history.

ON TEACHING ENGLISH. *By Howard Francis Seely. New York: American Book Company,* 1933. *Pp.* 391.

Teachers of English in the elementary and secondary schools should not overlook this volume. Based upon sound psychologic and educational principles, it is interestingly written and full of helpful suggestions. Application of the principles advocated will surely result in the improvement of instruction in English.

THE THEORY OF PLAY. *By Elmer D. Mitchell and Bernard S. Mason. New York: A. S. Barnes & Co.,* 1934. *Pp.* 547. $2.80.

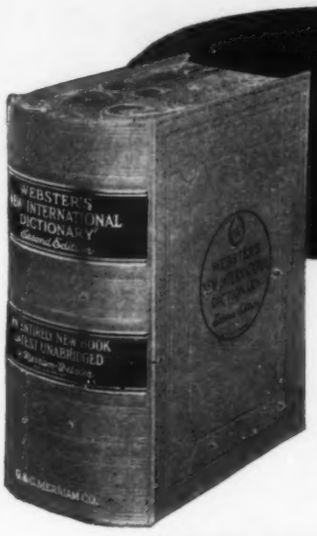
Here is the logical successor to the first outstanding book in this field by Mitchell and Bowen. The latter's death prevented the same combination of authors from revising the first text. The present production, however, is much more than a revision of the older book. Without doubt it will rank as the outstanding book of its type.

CHILD PSYCHOLOGY. *By John J. B. Morgan. New York: Farrar & Rinehart, Inc.,* 1934. *Pp.* xii + 502. $3.

In this excellent volume experiments, researches and case study findings are woven into an interesting and intelligent account of child nature. Practical suggestions growing out of the scientific material and the well selected collateral readings with page references following each chapter make it a book to be recommended not only for class use but as a helpful volume for both teachers and parents.

CHARACTER IN THE MAKING. *By Paul F. Voelker. Milwaukee, Wis.: E. M. Hale Company,* 1934. *Pp.* 163.

Here is a stimulating book worthy of reading by teachers, parents and all others interested in problems of character building. Doctor Voelker writes from the point of view of the psychologist and philosopher, and his thesis is the development of individual character. He discusses wishes, desires, ideas, ideals, motives, attitudes, values and all other impulses and inner sources that contribute to the making of individual character. There is no attempt to catalogue the desirable virtues or to list the undesirable vices. The book is an expansive contribution to the field of character literature. An excellent index and a list of references increase the value of the book.



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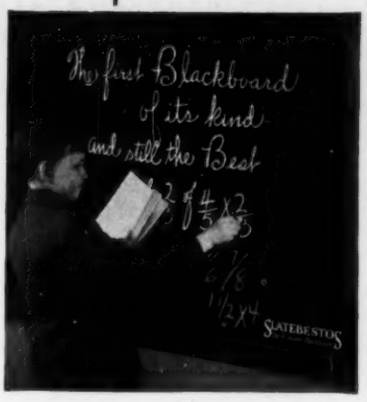

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RECREATION FOR GIRLS AND WOMEN. *By Ethel M. Bowers. New York: A. S. Barnes and Co.*, 1934. *Pp.* 425. $3.

This rich and inclusive treatment of play for girls and women of all ages is extremely valuable as a reference book for health and physical education teachers in both elementary and secondary schools.

PRACTICAL EVERYDAY CHEMISTRY. *Compiled by H. Bennett. New York: The Chemical Publishing Company*, 1934. *Pp.* 305. $2.

How to make anything you could possibly want, from fireworks to embalming fluid, is told in this book. A list of the trade names of the chemicals used in the book, and their manufacturers, is supplied. The volume is valuable as a guide for a hobby or just as a general reference book.

THE SECOND YEARBOOK OF SHORT PLAYS. *Selected and edited by Lee Owen Snook. Evanston, Ill.: Row, Peterson & Company*, 1934. *Pp.* 492.

The increasing and highly desirable emphasis placed on dramatic expression as one of the fine arts in basic education and as a means of leisure time expression makes an anthology of this type worth while. A most desirable need for secondary school libraries.

PRINCIPLES OF EDUCATION. *By James L. Mursell. New York: W. W. Norton & Company, Inc.*, 1934. *Pp.* 505. $2.75.

The author desired to find out what to include in a book on the principles of education, so he questionnaired 210 teachers of principles of education. He compared these returns with his own ideas and found them in substantial agreement. Simplicity of language is one of the worth while features of this presentation.

THE COMING AMERICAN REVOLUTION. *By George Soule. New York: The Macmillan Company*, 1934. *Pp.* 314. $2.50.

A capable author makes a thoughtful analysis of the fundamental problems underlying our culture. Whether or not he is in agreement with the author's assumptions or his conclusions, the professional educator cannot overlook this book. The actual revolution may be near or far off, but Mr. Soule's argument and his conclusions are extremely logical in light of his initial assumptions. The book is more fascinating than a mystery tale for a few hours before the fire on a winter evening.

DR. WILLIAM H. MAXWELL. *By Samuel P. Abelow. Brooklyn, New York: Scheba Publishing Company*, 1934. *Pp.* 176. $1.50.

There are many superintendents of public schools whose achievements are highly worthy of perpetuation in rational biographical form. If the Maxwell biography is the forerunner of a series it should be given a most cordial welcome. The life of Maxwell is treated rather gently by a most sympathetic author. The friends who contributed to it were extremely careful to note only the "nice things." The author does finally present a chapter on appraisal, but even this does not appear too strong. Maxwell was a robust character. His life should make a most colorful biography.

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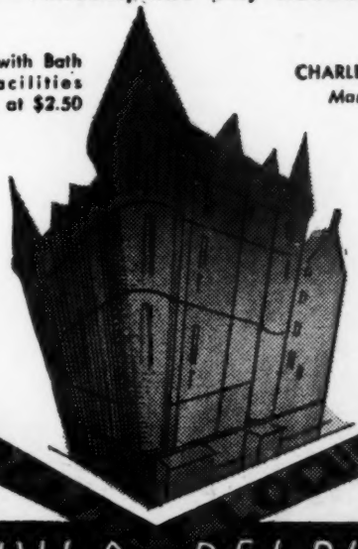

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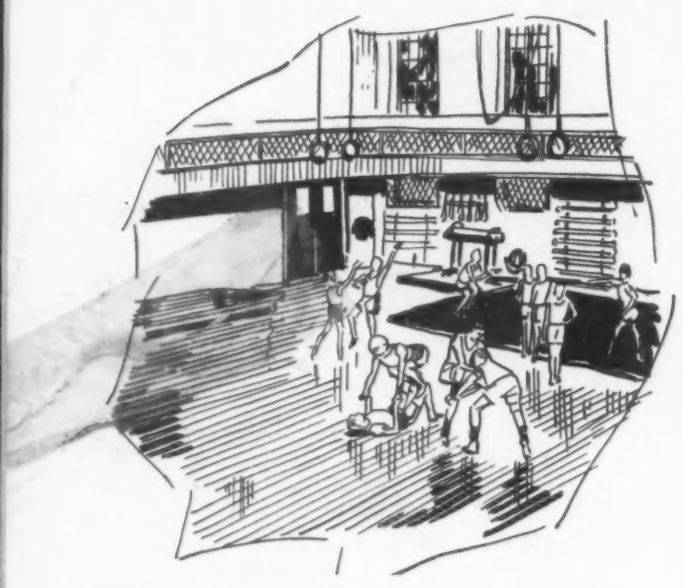
CHRISTMAS HINTS

for School Executives



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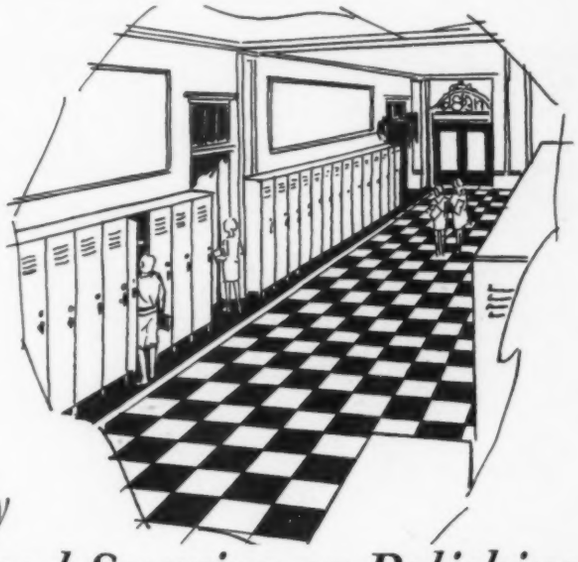

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